IMAGING SYSTEM
ERROR MESSAGE GUIDE

Version 3.0

October 2004

Department of Veterans Affairs
System Design and Development
V*IST***A** Imaging

Preface

The purpose of this guide is to provide information about error messages as they relate to the Veterans Health Information Systems and Technology Architecture (**V***IST***A)** Imaging V. 3.0 package (i.e., files, routines, and configuration that comprise the **V***IST***A** Imaging System).

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Revision History

10 Nov 2003	Changed title page/footer dates.
13 Nov 2003	Edited document to remove Reference Source errors.
20 Nov 2003	Corrected references to C-Store.
20 Mar 2004	Patch 11 updates
14 Oct 2004	Patch 30 updates

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Chapter 1 DICOM Error Messages

This chapter contains a number of hints for resolving problems.

1.1 License Limits

The MUMPS database server used by the **V*IST*A** Imaging DICOM Gateway requires a large enough license to allow all users, background tasks, and network connections to operate simultaneously. Of course, the larger the license, the higher the fee. In the **V*IST*A** Imaging DICOM Gateway Installation Guide, a minimum license size is specified as **16 users** and **8 network connections**. This size system will allow for 25 simultaneous job partitions, one for the MSM System itself, a maximum of 16 that run in the foreground, and the rest in the background[1]. When the MUMPS engine on a **V*IST*A** Imaging DICOM Gateway has a smaller license, it may not function adequately, and the error messages shown in this section may appear.

An error message may appear when an attempt is made to start an additional task on the database server, while all license slots are being utilized. There are a number of situations where such a message can show up.

- C-Store connection
- Telnet connection

The discussion below provides more details about each of these.

As the actual usage of the database server increases, the first action should be to rethink the allocation of tasks over the various **V*IST*A** Imaging DICOM Gateway processors. Only when additional tasks are needed, and all of the available processors have been "maxed out", should an additional processor be acquired, or the license count on at least one processor be increased.

Contact the vendor of the MUMPS Database server (InterSystems Corporation) or a designated reseller to acquire licenses, or to increase license limits.

1.1.1 Limit on Number of C-Store Processes

For each C-Store processor, a background task will be started on the **V*IST*A** Imaging DICOM Gateway. The license quota for number of users needs to be high enough to support all C-Store processes that are assigned to a single Image Gateway.

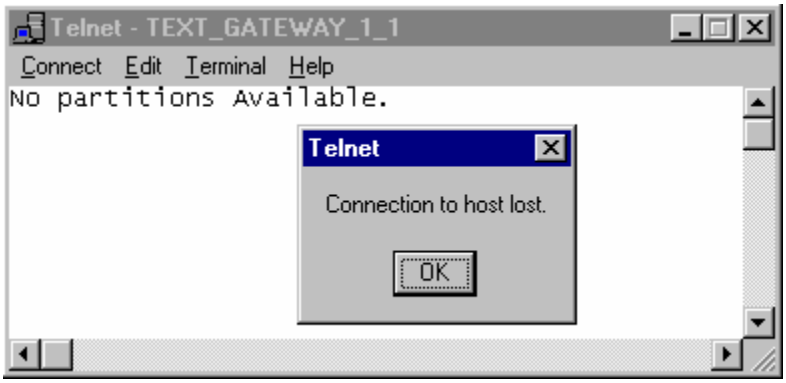
When the quota for "users" is not high enough to start all C-Store processes, the start up log of the failing MAG_CSTORE.EXE task will contain this error message:

[1] The total number of simultaneous jobs is 1.5 times the number of users specified by the license.

If this error message occurs, first try to re-distribute the various C-Store providers over the **V*IST*A** DICOM Image Gateways. If all Image Gateways are maxed out, consider obtaining a license with a higher "user" quota.

1.1.2 Limit on Number of Telnet Sessions

Each telnet session counts as one user. When the "user" quota is not high enough to accommodate all needed interactive sessions, the attempt to launch a telnet session will produce this error message:



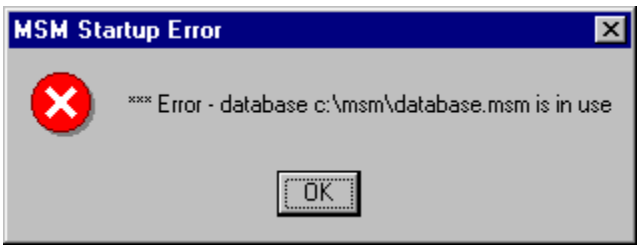
When this error occurs, local system manager should use the MSM Console window, or any of the other open telnet sessions to run an MSM System Status, and terminate any non-essential telnet sessions (`Do ^KILLJOB`).

When all running telnet sessions are essential, consider obtaining a license with a higher user quota.

1.2 MSM Startup Error Messages

1.2.1 MSM is Already running

When MSM is already running, and an attempt is made to start a second copy of the MSM Console, the following error message will be displayed.



This message can be ignored (just click on the "**OK**" button).

1.2.2 A Different Configuration of MSM is Already running

When a different configuration of MSM is already running, and an attempt is made to start an instance of the MSM Console, the following error messages will be displayed.

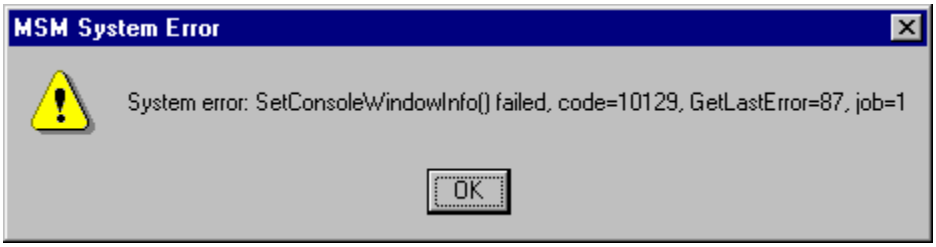
and

These messages indicate that the network connection is already in use by another configuration (In the second error message, the name of the actual Ethernet card will appear). Click on "OK" in both error messages, and shut down the newly started MSM configuration.

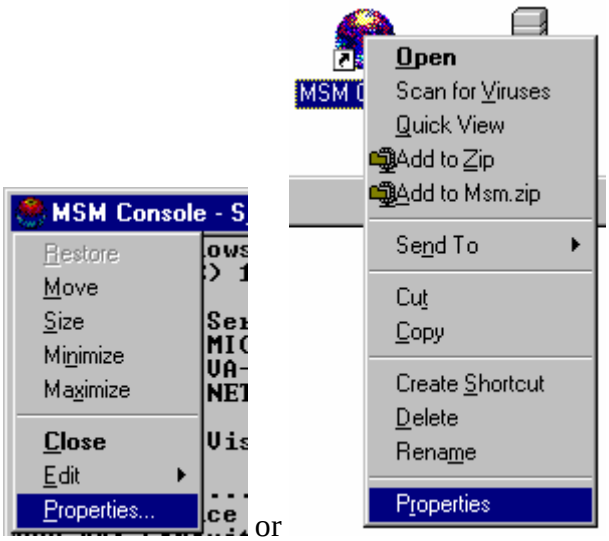
If the newly started MSM configuration should be running, rather than the one that is already using the network connection, shut down both MSM environments, and only start the one that is needed to be running.

1.2.3 Invalid Window Settings

Sometimes, when MSM is started, the following error message will pop up that indicates that the console window could not be started:



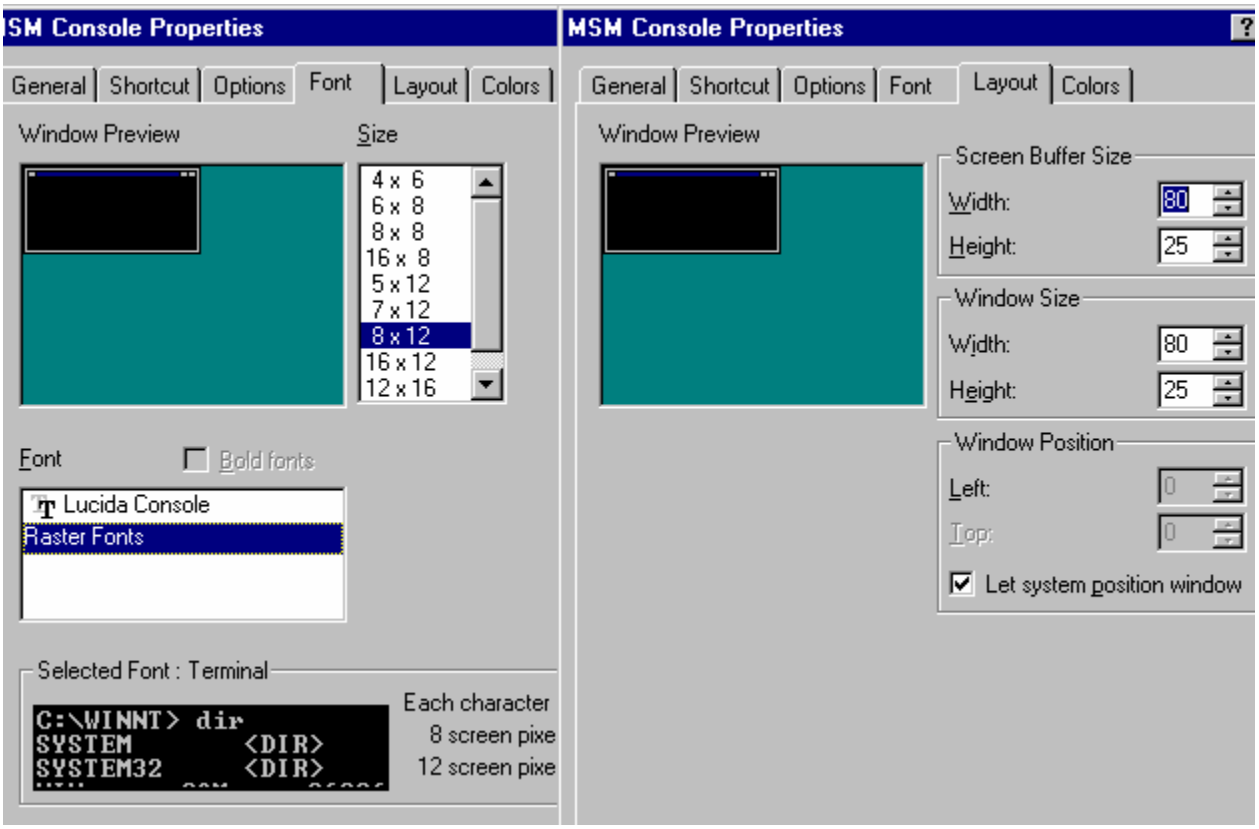
The meaning of this message is that the current settings for the console window are invalid. To recover from this condition, either click on the icon in the left upper corner of the MSM Console window or right-click on the icon for the MSM Console itself.



or

In either case, select "**Properties**" from the pop-up menu.

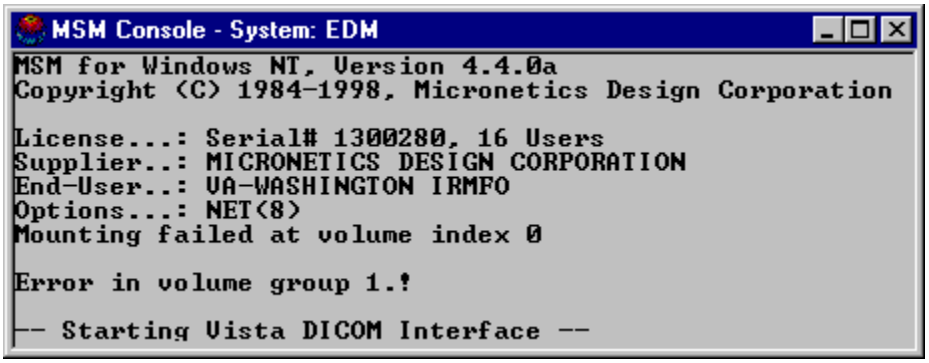
In the properties dialog, make sure that the font-size is set small enough that the complete console window fits on one screen full, and make sure that the window size is 80 columns by 25 lines.



When saving any modified settings, be certain to update the settings for the "shortcut" that started the MSM Console.

1.2.4 DICOM Database Cannot be Mounted

When a system is restarted after a power failure, the database may be in a state that does not allow automatic mounting of the database. In such a case, an error message will appear during system start-up. Typically, the message will indicate that the database could not be mounted, or that Before Image Journaling could not be started.

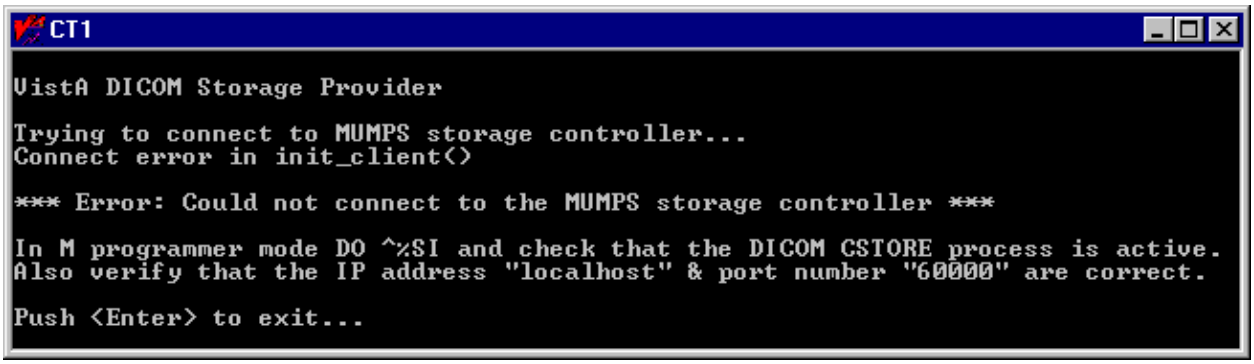


When such a message appears, call Customer Support to repair the database.

1.3 Improper Start-Up Sequence

1.3.1 Start C-Store Program before MSM Server is Running

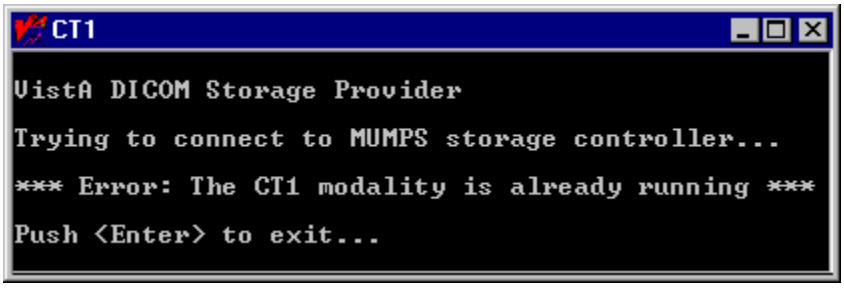
When an attempt is made to start a C-Store program (MAG_CSTORE.EXE) before the MSM Server has been started, an error message like the following will appear:



In order to resolve this problem, first start the MSM Server and then start the C-Store program.

1.3.2 Start C-Store Program while it is already Running

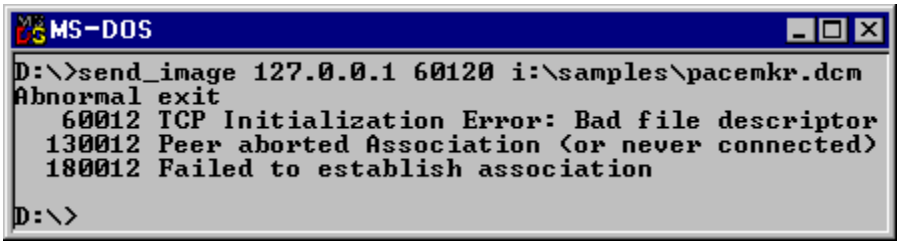
When an attempt is made to start an instance of a C-Store program, while a copy of that program for that instrument is already running, the following error message will be reported:



In order to resolve this problem, simply press <**Enter**> to terminate the second instance of the program.

1.3.3 Transmit Image before C-Store Program is Running

When an attempt is made to store an image while the C-Store program for the instrument is not running, an error message is likely to appear. The actual error message is instrument-specific. The following one is produced by the Mallinckrodt Send_Image program and is used as an example.



In order to resolve this problem, first start the C-Store program by double-clicking on its icon, and then transmit the image.

1.3.4 Too many Instruments for one Image Gateway

Each instrument that transmits images to an Image Gateway uses one MUMPS background partition. When too many instruments are assigned to one single Image Gateway exceeding the maximum partition count, the following error message will appear:

When this happens, first try to re-distribute the various instruments over the available Image Gateways. If that isn't possible, consider acquiring a license for more "users" for the processor.

1.3.5 Images are acquired, but are not moved to the File Server

When images are being acquired successfully, but are not being transported to the Windows File Server, this is most likely due to the fact that the "Process DICOM Images" task is not running. Check to make sure that it is running.

If "Process DICOM Images" is running, and images are still not moving to the Windows File Server, one of the following six problems might be happening:

- The patient/study information in the image header is incorrect and the association cannot be properly made.
- The network connection from the DICOM Image Gateway to the Windows File Server may be down.
- There may not be an entry in the Modality.DIC for the manufacturer-model-modality defined in the image header.
- There may be a run-away job on the **V*IST*A** Imaging DICOM Gateway, either in MUMPS or elsewhere, which is preventing the image-processing task from having the necessary CPU resources. (Use Windows™ Task Manager and ^%SS to further identify this problem.)
- There may be a problem with a run-away job on the **V*IST*A** main HIS preventing the Kernel Broker from having the necessary CPU resources.
- There may be other problems.

1.4 Menu Options not Available

The availability of the menu options on the DICOM Gateway is affected by a number of issues:

- System configuration settings
- End-user privileges
- Ad-hoc operational issues

The very first time that the menu is displayed on a newly installed system, only those menu options that relate to set-up and configuration will be available. Menu options that are available are shown in bold face; menu options that are not available are shown in a fainter font and are enclosed in parentheses:

```
VistA DICOM Gateway Menu --

   1  (Text Gateway)
   2  (Image Gateway)
   3  (Routing Gateway)
   4  System Maintenance
   5  Quit

  OPTION:
```

1.4.1 System Configuration Settings

Using menu option **Update Gateway Configuration Parameters** (menu path 4-2-2), a number of parameters can be (re)defined. These parameters determine how the DICOM Gateway can be used. Three of these parameters determine which main menu groups will be available.

When these parameters are set as indicated in the sample dialog below, only the menu options for the “Text Gateway” will be available.

Sample dialog:

```
Will this computer be a DICOM Image Gateway? NO <Enter>
Will this computer be a DICOM Text Gateway? YES <Enter>
Will this computer be a Routing Processor? NO <Enter>
```

Sample menu:

```
VistA DICOM Gateway Menu -- Test System

   1  Text Gateway
   2  (Image Gateway)
   3  (Routing Gateway)
   4  System Maintenance
   5  Quit

  OPTION:
```

1.4.2 End-User Privileges

A user can be logged in on a DICOM Gateway as either a “fully privileged” user or as a “view only” user. When a user is “fully privileged”, typically all menu options will be available. When a user has “view only” access, all menu options that can be used to modify data will be made unavailable. For instance, a “view only” user will see the following menu on the Text Gateway:

```
VistA DICOM Text Gateway -- Test System

   1  (Start Processing Text Messages from HIS)
   2  (Send DICOM Text Messages to Commercial PACS or Broker)
   3  Display Text Gateway Statistics
   4  Display Modality Worklist Statistics
   5  Modality Worklist Query
   6  Display a HL7 Message
   7  Display a DICOM Message
   8  (Modify the HL7 Message Pointer)
   9  Generate a Daily Summary Report
  10  (Purge Old Modality Worklist Entries)
  11  (Purge Old DICOM Message Files)
  12  (Purge Old HL7 Transaction Global Nodes)
  13  (Purge Old Audit Records)

  OPTION:
```

1.4.3 Ad-Hoc Operational Issues

Certain menu options can only be executed after certain configuration steps have been completed. For instance, there are menu options that can send e-mail messages when errors occur. Those menu options will not be available until an e-mail address has been configured (using menu option **Update Gateway Configuration Parameters** (menu path 4-2-2). When menu options are made unavailable because no e-mail address has been set up yet, the following message will appear at the bottom of the menu:

```
VistA DICOM Text Gateway -- Test System

   1  (Start Processing Text Messages from HIS)
   2  Send DICOM Text Messages to Commercial PACS or Broker
   3  Display Text Gateway Statistics
   4  Display Modality Worklist Statistics
   5  Modality Worklist Query
   6  Display a HL7 Message
   7  Display a DICOM Message
   8  Modify the HL7 Message Pointer
   9  Generate a Daily Summary Report
  10  Purge Old Modality Worklist Entries
  11  Purge Old DICOM Message Files
  12  Purge Old HL7 Transaction Global Nodes
  13  Purge Old Audit Records

You must first use option 4-2-2 to specify E-mail information.

  OPTION:
```

Other menu options require that the location of the DICOM Gateway must be properly configured. The location-information is also set up using menu option **Update Gateway Configuration Parameters** (menu path 4-2-2). When the location-information is missing, the following error message will appear:

```
VistA DICOM Text Gateway -- Test System

   1  (Start Processing Text Messages from HIS)
   2  (Send DICOM Text Messages to Commercial PACS or Broker)
   3  (Display Text Gateway Statistics)
   4  (Display Modality Worklist Statistics)
   5  Modality Worklist Query
   6  Display a HL7 Message
   7  Display a DICOM Message
   8  Modify the HL7 Message Pointer
   9  (Generate a Daily Summary Report)
  10  Purge Old Modality Worklist Entries
  11  Purge Old DICOM Message Files
  12  Purge Old HL7 Transaction Global Nodes
  13  (Purge Old Audit Records)

You must first use option 4-2-2 to obtain Location information.

  OPTION:
```

Finally, the menu program can be started in two different ways. Normally, the menu program is started after an end-user logs in using an access and verify code that is valid on the **V*IST*A** system. When proper credentials have been provided, the user can use the various menu options and perform actions that may require that Remote Procedures are executed on the **V*IST*A** system.

The other possibility is that an end-user logs in using credentials that are used for local maintenance on the DICOM Gateway only. In this case, the DICOM Gateway will not be able to call any Remote Procedures on the **V*IST*A**, but menu options will be available to perform any local maintenance that may be necessary. When a user is logged in using “local maintenance” credentials, a warning message is displayed at the bottom of the menu:

```
VistA DICOM Gateway Menu -- Test System

   1  Text Gateway
   2  Image Gateway
   3  Routing Gateway
   4  System Maintenance
   5  Quit

Currently not authorized to invoke RPCs on VistA.

  OPTION:
```

1.5 Privileges and Permissions

By the nature of the information that is stored and manipulated in a hospital environment, many

aspects of the **V*IST*A** Imaging DICOM Gateway are subject to access restrictions. It is important to keep track of the various user-accounts that have to be created and utilized to ensure proper access for the various parts of the system.

When any part of the software reports an access restriction type of error, the most common causes are that…

- The current user is logged in using a user-account that does not have the privileges needed to perform the action at hand
- A password has been changed, and the current user has not yet updated the registered copy of that password to the current value.

It is also important to be aware that…

- Some access restrictions apply to the current user
- Some access restrictions apply to the file at hand
- Some access restrictions apply to the disk-share where a file is stored
- Different access privileges may apply for reading an existing file and for creating a new file

Typical error messages that may appear are “Image file subdirectory creation error”, “Cannot create the image subdirectory: -5”, “Cannot find file xxxx” and “Access Denied”.

1.6 DDP Problems

The protocol that is being used for the communication between the **V*IST*A** Imaging DICOM Gateway processors and the main **V*IST*A** Hospital Information System is the VistA MUMPS-to-MUMPS Kernel Broker). The **V*IST*A** Imaging DICOM Gateway Installation Guide describes the process to configure the Gateway processors so that this connectivity can be established.

A menu-option is available to validate that the MUMPS-to-MUMPS Broker connectivity is working.

Under normal circumstances, the **V*IST*A** Imaging DICOM Gateway software is resilient enough to recover from common disruptions in network connectivity.

However, when changes in system configuration occur on either the main **V*IST*A** system, or on one of the **V*IST*A** Imaging DICOM Gateway processors, the automatic restart may fail, as the configuration of the **V*IST*A** Imaging DICOM Gateway processor needs to remain synchronized with the configuration of the main **V*IST*A** system.

When many disruptions occur, it may be necessary to purge error messages with <NOSYS>, <DSTDB>, <DSCON> and <DDPER> from the MUMPS error log. If there are so many error reports that the database overflows, see the section about a full database.

1.7 Disk Full

In the course of doing their work, the various processes create temporary data files which are later removed. On occasion, it may be necessary to manually remove data files that have been

inadvertently left behind, perhaps by a run-away task (for example, one that is trying to read an incorrectly constructed DICOM image file). The sections below describe several utility functions that may be of help in removing this old computer litter.

There are two major groups of problems that result in "disk full" error messages:

- Situations where all space within a MUMPS database has been used up.
- Situations where all space on a physical medium has been used up.

1.7.1 Full MUMPS Databases

1.7.1.1 Data Stored in Wrong Database

The **V*IST*A** Imaging DICOM Gateway locally ***only*** stores and maintains data in ***its own*** database (volume group DCM). Any error messages that indicate issues with storage in other databases (e.g. MGR or IMx) would indicate that data has been stored in a wrong place. When this happens, the spurious data should be removed from the database where it should not have been stored. (Of course, the **V*IST*A** Imaging DICOM Gateway remotely stores data in ^MAG(2005) and other translated globals.)

1.7.1.2 Purge MUMPS Error Log

When a database "fills up", ***DO NOT*** increase the size of the database container file. Under normal circumstances, 15MB is more than enough to hold the DICOM database. As a safety margin, the database is sized at 20MB. When the database becomes "full", this indicates an error by itself. First, the root-cause of this error should be determined, then the extraneous data should be removed, and after this normal processing can continue with plenty of space in the 20MB database.

The most likely cause for a "database full" situation is that a burst of similar errors caused the error log to overflow the database.

When this type of error occurs, execute the following steps (preferably, call customer support for help in executing these steps):

1. Login in programming mode as MGR using the MSM console window.

2. Terminate all telnet processes.

3. Verify that your task is the ONLY active MUMPS process on the system (`Do ^%SS`)

4. Terminate all remaining background server processes (`Do ^KILLJOB`, option 3).

5. Verify that the database is not corrupted (`Do ^VALIDATE`, do ***not*** turn on TRACE, scan all volumes).

6. If the database is corrupted, first resolve all issues that are reported by `^VALIDATE`, using

^DBFIX.
(Learning to use ^DBFIX requires a multi-day class from the database vendor. Most of the information learned in this class is “under non-disclosure restrictions”. Call customer support if a database repair is needed.)

7. A special case is global variable ^MAGDMLOG. When this global variable has become corrupted, it’s not worth the time to try and fix it. Use ^DBFIX to remove the global variable from the Global Directory, and use ^RECOVER to remove the actual data.

8. Once it is established that it is safe to use the database, login in programming mode in DCM.

9. Check the error log (Do ^%ER) to see which errors happened over the past few days. If the bulk of the errors are DDP related, just erase them. If the error log indicates a persistent software problem, be sure to save a copy of that error report for the developer.

10. Clean out the error log

11. Remove temporary data (Kill ^TMP).

12. Check how much space is now available in the database (Do ^%SP). If it’s more than 15%, the system can be put back into operation (Shut down MSM and restart it, so that all background processes are running again.)

Once the system is back up and running, execute routine purge functions.

Purging the files and HL7 pointers to 30 days should clear sufficient disk space. (Options 10, 11, and 12 on the menu)

The U-V/W-X queue pointers should be checked.

MUMPS error logs reside in the MUMPS databases on each **V*IST*A** Imaging DICOM Gateways in global variable ^UTILITY.

Old entries in the MUMPS error log can be purged using a menu-option.

1.7.1.3 Purge Old Modality Worklist Entries

The Modality Worklist database resides in the MUMPS database on the DICOM Text Gateway in global variable ^MAGDWLST.

Old entries in the Modality Worklist database can be purged using a menu-option.

1.7.1.4 Purge Old HL7 Transaction Global Nodes

The HL7 transactions are stored in the main hospital **V*IST*A** MUMPS database in global variable ^MAGDHL7.

Old nodes in that global variable can be purged using a menu-option.

1.7.1.5 Purge Old Audit Records

Audit records that pertain to the whole system are stored in the main hospital **V*IST*A** MUMPS database in global variable ^MAGDAUDT.

Old audit records can be purged using a menu-option. This allows the global space to be recovered for other use.

1.7.1.6 Purge DICOM Image Processing Error Logs

There are four DICOM log files that hold images that fail to be properly processed:

- DICOM Failed Images – wrong patient/study id – ^MAGD(2006.575)
- DICOM Undefined Modalities – unknown modalities - ^MAGDINPT(2006.5713)
- DICOM Fixed Image – fixed image files - ^MAGDINPT(2006.5712)
- DICOM Error Log – holds deleted images – ^MAGD(2006.599)

Use of the DICOM Failed Image Correction procedure (see Chapter 7 of the **V*IST*A** DICOM Gateway User Manual) automatically deletes entries from the first three. No purging is currently available for the DICOM Error Log, however.

1.7.2 Full Physical Media

1.7.2.1 Purge Old DICOM Message Files

On the DICCOM Text Gateway, the DICOM message files reside in directories with names like **D:\DICOM\DATA*n***, where ***n*** is an integer number, typically 1 and usually not higher than 2.

Old DICOM message files are purged automatically by the message generating application. They can also be purged using a menu-option.

The entire subdirectory tree can be purged by running **INIT_DICOM.BAT** in the **DATAn** directory from the command line. (This has to run on a "quiet system" – be sure to stop all MUMPS processes before doing this.)

1.7.2.2 Purge DICOM Image Files

On the DICOM Image Gateway, the DICOM image files are stored in the **D:\DICOM\IMAGE_IN** and **D:\DICOM\IMAGE_OUT** directories for incoming and outgoing images respectively.

Normally, all image deletion from these two directories is under automatic program control. Incoming images are deleted from the **D:\DICOM\IMAGE_IN** directory as they are processed. Incoming images that cannot be processed remain in the directory until they are resolved using

the DICOM Failed Image Correction application. Incomplete image files will remain in this directory for at least an hour before they are renamed by appending "_incomplete" to the filename. These files (*.dcm_incomplete) will remain in the **D:\DICOM\IMAGE_IN** directory for further research by site personnel and will require manual deletion.

Outgoing images are automatically deleted from the **D:\DICOM\IMAGE_OUT** directory as they are sent. However, they may remain if there is a problem with the transmission. Old *.dcm files in this directory can be manually deleted.

In either case, on an as-needed basis, use MS Explorer to delete the old image files.

1.7.2.3 Other Possible Issues

In addition to the possibility that a disk is physically full, there are a number of other reasons why an error message like "Insufficient disk space to store images. Waiting 10 minutes." might appear:

- Images are not processed due to lost connection with server
- Images are not processed due to incorrect information in headers.
- Images are not processed due to failure of the "Process Image" process.

Such error messages are usually displayed in the telnet window for the session labeled **PACS Request Image Transfer (2_2)**.

Make sure that the session labeled **Process DICOM Images** (**2_3**) is running.

It is very likely that the directory `x:\DICOM\Image_In` contains files for images that require corrections. See the window for the session labeled **Image Status (2_5)** for details. The latter window will also contain information on how badly backed up the system may be (number of files to be processed). Disk space will become available as images are processed. Just keep an eye on the status window to make sure the image count is ***de***creasing.

Some image files may be as large as 7MB. When a site needs to store a large number of these files, it is imperative to ensure that sufficient disk space is available.

It may be possible to use the DICOM FIX utility to correct images with demographic information that does not match the HIS information.

The **V*IST*A** Imaging DICOM Gateway uses a site parameter that establishes the percentage of disk space that should remain free. If this percentage is too high, the system will start producing error messages about insufficient disk space when there still is a lot of disk space. To ensure that this parameter is set to a reasonable value, use VA-FileMan (Enter/Edit, file 2006.1):

```
PCT FREE SPACE DICOM MSGS: 10//
```

Typically, this value should not be larger than 15%.

1.8 Extremely Slow Performance

1.8.1 Issues at the Network and Operating System Level

When a normally operating system begins to run very slowly, the first question to ask is "what changed?"

If a specific system is extremely slow and others are fine, then launch Windows™ Task Manager to determine what is running on the system. Is there a run-away task? (The problem might be as simple as a user who inadvertently clicked too many times on an icon and launched multiple tasks!)

The problem might be with the main Hospital Information System. There could be a "run-away" job on it or a situation where the MUMPS-to-MUMPS Broker connection is not functioning properly.

A slow DICOM Image Gateway may be related to the Windows™ file server problem. Is there adequate free disk space on the server for new images?

The problem could also be with the network. Check whether the PC network interface is properly set up, especially the speed and duplex settings. The settings should be the same on the **V***IST***A** Imaging DICOM Gateway as on the hubs and routers. In a wide-area network situation, check that the WAN is operating properly.

If you suspect that the amount of work for the system might be exceeding the available resources, check the following possible causes:

- If bad performance mainly occurs during peak times, there may be a network bandwidth issue. All devices used for **V***IST***A** Imaging must be placed on a switched rather than a shared connection. This will reduce delays due to contention and collisions on the device's Ethernet segment. If the device is already on switched Ethernet, one could try upgrading the network for a higher throughput capacity.
- There could be a bottleneck on the Imaging Storage Server. This could be the case when the Storage Server has a shared Ethernet connection or is connected via a 10 Mbps or a 100 Mbps Ethernet. In that case, an upgrade to 1000 Mbps (Gigabit Ethernet) could resolve the problem.
- There could be an IP routing bottleneck. If the device is on a different TCP/IP subnet than the Imaging Storage Server, the router might be the bottleneck. It is recommended that all **V***IST***A** Imaging devices be on the same subnet, so that there will be no need for any routing. The **V***IST***A** Imaging DICOM Gateways and Background Processors must be on the same subnet as the Imaging Storage Server. It may be possible to "collapse" multiple subnets into a single one by migrating to a wider subnet mask.
- If the site uses VLANs, routing bottlenecks may not be completely eliminated. Double-check the definitions of the VLANs and the assignment of processors to subnets. Review the routing set-up.

- Check the Network Interface Card (NIC) and the network switch or hub to make sure that none of the components is using “automatic sensing” of speed. If one component is set to “auto” or “auto-detect”, and another component is expecting to use a specific speed, time may be lost in unnecessary negotiations. This feature can sometimes fail.

1.8.2 Issues at the MSM Level

Sometimes it happens that an MSM system causes the CPU to be busy for 100%, while apparently, the MSM system is not doing anything.

A likely cause for this is that the “**SPX Workstation Server**” is running (this is a service that should **not ever** be running in the context of a **V*IST*A** Imaging **V*IST*A** Imaging DICOM Gateway). Such a server will look for a connection until it finds one, and uses all available CPU time, effectively doing nothing.

In the distributed system, this server is disabled, but it can become enabled inadvertently, typically when one carelessly "carriage-returns" through the system management program `^SYSGEN`.

The option that turns it “off” is:

>**D ^SYSGEN <Enter>**
Select Option: **3 <Enter>** - Edit Configuration Parameters
Select Configuration <DICOM>: **<Enter>**
Select Option: **15 <Enter>** - Network Configuration
Select Option: **11 <Enter>** - Workstation Server Configuration

Enter IP Port for Workstation TCP/IP Connect <33086>: **33086 <Enter>**

Enter IP Port for Workstation SPX Connect <33085>: **- <Enter>**

Enter Password <DICOM>: **<Enter>**

When, at the question for the SPX Connect, a “carriage return” is entered, the service will be enabled the next time that the system is restarted. At this question, the answer must **always** be a **minus sign**, so that the service will remain disabled.

The easiest way to tell whether or not a system is performing slowly because of this issue is to run the system utility program `^%SI` . When the report produced by this program includes the highlighted line, the SPX service is active and should be turned off using the system management program `^SYSGEN`.

```
System Process                        Status      Job#             Job Status
-------------------------------------------------------------------------------
MSM                                   system        1              Running
Distributed Data Processing           active        3              DDP
                                                    4              DDP
Telnet Service                        Enabled
```

```
Before Image Journaling             enabled                    Volume Groups:
                                                               DCE
MSM-Activate1 service (TCPIP - 1666) active        8           TCP_IO
Workstation service (SPX - 33085)    active        7           WaitQ2a
Workstation service (TCPIP - 33086)  active        6           TCP_IO
PDQweb service (TCPIP - 2001)        active        9           TCP_IO
User service DICOM CSTORE (TCPIP - 60000)active   12           TCP_IO
User service MOD WORKLIST (TCPIP - 60010)active   13           TCP_IO
```

Note: The SPX option is automatically turned off by the Version 2.5 **V*IST*A** Imaging DICOM Gateway software.

1.9 Network Connectivity Problems

Connectivity problems can exhibit themselves in a number of ways:

- Users are unable to login. They see messages like “Domain Controller Unavailable” when they attempt to login into the system.
- The window “**Network Neighborhood**” does not show any other computers
- There are error messages while booting up the computer, or when attempting to start a program.
- There are error messages related to TCP/IP, NetBIOS name resolution or NIC hardware in the system’s “**Event Viewer**”.
- There may be errors in configuration information.

If any of the above situations occurs, the following steps usually lead to a quick assessment of the actual problem.

1.9.1 Only one V*IST*A Imaging DICOM Gateway (that used to work) is affected

Check first whether the problem is localized in one computer, or shared by multiple ones. If the problem occurs only in one computer, check the following:

1. Check that all cables are properly connected.

2. Check that the information in the appropriate configuration file is correct (Instrument.DIC and PortList.DIC contain port numbers, SCU_List.DIC contains IP addresses and port numbers and AE Titles).

3. Try to “ping” the affected computer from itself (first try “**ping 127.0.0.1**” and then try “**ping** *assigned_IP_address*”). If either of these attempts fails, the IP settings are mis-configured.

4. Check the computer’s IP configuration (utility program `ipconfig.exe`). Make sure that the computer has a usable IP address, subnet mask and gateway address. Attempt to reach a server or network resource that is known to be operational. Use the “ping” utility to see if network traffic is being routed correctly to the ailing system. Use `tracert.exe` to further verify the network pathway.

5. Try to "ping" the default gateway from the affected computer. If this fails, either the address for the default gateway is not entered, or it is wrong.

6. Make sure that no other system has the **V*IST*A** Imaging DICOM Gateway's IP address. This can be easily checked by disconnecting the ailing system, and then trying to "ping" its IP address from another location. If there is a response, then obviously another computer is using the same IP address.

7. Make sure that no other MUMPS system has the same 3-character system name.

8. Make sure that Microsoft's DHCP is not being used, check that the affected computer has correct WINS and DNS information. Make sure that IP addresses of any incoming clients are in the Gateway's HOSTS table. This will prevent excessive name lookup.

9. Double-check the values for the subnet mask and the default gateway. If either of these is wrong, the processor may not be able to "see outside" its subnet. As a result, Image Gateways and Workstations may be unable to access either the modalities or the **V*IST*A** Hospital Information System.

10. Double-check that the TCP/IP protocol is configured properly on the system in question by looking at the network properties. Confirm that TCP/IP is in the list of protocols and verify that it is configured with an IP address and an address for a default gateway. The default gateway must have an address that is on the same subnet as the system itself.

11. Use a utility program like `netperf.exe` (combined with `netserver.exe`) to measure the effective speed of the network connection.

1.9.2 Several processors are affected

When multiple computers are having problems, check the following:

1. Look for problems with the network or with the router. To see if network traffic is being routed correctly, use the "ping" utility on an affected computer to attempt to reach a server or network resource that is known to be operational.

2. Check the server(s). Is the domain controller up and running? Is it reachable from the network? Can the server be reached via the network? Are the network interface cards and protocols configured properly?

3. If it is possible to login into the Windows™ Domain, but not into **V*IST*A**, check whether **V*IST*A** is running and "reachable" via the network.

4. On the server, use "**Server Manager**" to check "**Services**" to make sure that the appropriate services are running.

5. Check that the information in the appropriate configuration file is correct (Instrument.DIC and PortList.DIC contain port numbers, SCU_List.DIC contains IP addresses and port numbers and AE Titles).

6. Try to "ping" the server from any of the affected processors. If this attempt fails, try to "**ping 127.0.0.1**" on the server to make sure that the server's IP address and settings are correct. From the server, try to "ping" its default gateway. From one of the affected stations, try to "ping" the server's gateway.

7. Use the utility program `tracert.exe` to trace the access route to the server. E.g.

```
D:\>ipconfig <Enter>


Windows NT IP Configuration

Ethernet adapter DC21X41:

        IP Address. . . . . . . . . : 11.22.33.43
        Subnet Mask . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . : 11.22.33.45

D:\>tracert 11.22.33.45 <Enter>

Tracing route to wciofo-reglwan.eth100.net.va.gov [11.22.33.45]
over a maximum of 30 hops:

  1   <10 ms   <10 ms   <10 ms  wciofo-reglwan.eth100.net.va.gov [11.22.33.45]

Trace complete.

D:\>
```

8. If tracert is not successful, there is most likely a routing problem. Links that are probably down are indicated by asterisks in the report from tracert.

9. Try using **Windows™ Explorer** to see if it is possible to browse to the server. Users with Administrator privileges on the server have access to the "administrative shares". They could attempt to map a drive to one of these "shares". If such attempts fail, it is likely that the WINS/DNS setup is incorrect.

1.9.3 One or more windows show an error message

One error message that may show up on occasion is "MUMPS length network_read() error: -1".

There are several possible causes for this error message:

- Network error
- MSM console is closed or crashed
- Disk is Full

When this error message appears, follow the steps below to find the root-cause of the problem:

- Verify connectivity by PINGing in both directions
- Verify connectivity by executing a DICOM echo
- Check that the MSM Console window is still up-and-running.

- Verify that there is sufficient disk space on the disk that contains the directories x:\DICOM\Data1 and x:\DICOM\Image_In
- Check that there is sufficient space in the MUMPS database for normal processing

1.9.4 PACS isn't Sending an Image Complete Message

This situation typically comes about when the TCP link with the PACS is broken.

Before attempting to restart any processes, examine the log files to ascertain that the exam complete message is being received from the PACS. The correct C-Move request should be issued by **V*IST*A**, but response may not be returned from the PACS. Restarting the gateway process for the PACS (**1-2-x**) usually restores normal functionality

1.10 Other Configuration Issues

1.10.1 Loading Master Files

After (re)loading the Master Files, the error message "nnn error(s) encountered while building master files" may appear. When this message appears, it indicates that some error(s) have been found in one or more of the Master Files. The site-modifiable master files are:

- Instrument.DIC
- Modality.DIC
- PortList.DIC
- SCU_List.DIC
- WorkList.DIC

Check the contents of these files to repair any reported issues.

Most commonly, the "Institution Name" is not set in WorkList.DIC. The default value that is specified in the distributed file is: "`<add local name here>`". It should be either the facility number or the name, e.g.:

`AE_Title|523|` ... or
`AE_Title|BOSTON, MA|` ...

See the **V*IST*A** Imaging DICOM Gateway Installation Guide for more information about properly formatted specifications in Master Files.

1.10.2 Incomplete Master Files

It may happen that not all modalities that are transmitting images to an image gateway are described in the master file named `Modality.DIC`. When this happens, the error message "The following images have undefined modalities" will appear.

In such a case, use the information about the modality that is presented in the error message to add the missing modalities to the master file.

Note: Don't forget to re-load the master file.

1.10.3 Multiple Instruments are Configured to Use the Same Port Number

The **V*IST*A** Imaging DICOM Gateways should be configured such that each instrument has its own unique port number assigned for communication. When multiple instruments share a port number, only the one that happens to connect first will be able to communicate with its gateway. Any other instrument attempting to use the same port number will cause an error message "Cannot listen to DICOM port because it is already being used".

When this happens, verify that there are no conflicts in the master file `Instrument.DIC`. Reload the master file after it has been corrected.

When the configuration has been corrected, restart the **V*IST*A** Imaging DICOM gateway. Just closing and re-starting the modality windows will not have the effect that any ports are released. The MSM system must be restarted to release all ports.

1.10.4 Digitized Images Appear Small on the Diagnostic Workstation

The master file `Modality.dic` contains a parameter that provides a number of settings that influence the conversion from the original file format to TARGA™ format. See the **V*IST*A** Imaging DICOM Gateway Installation Guide for a complete description of these parameters.

Pay special attention to the (sub)parameters **R1**, **R2**, **R4** and **R8** that may be used to create a "small" thumbnail version of the image (also known as "abstract" or "icon"). When one of these parameters is applied to the conversion of the "full" image, a severe loss of resolution may be the result.

1.10.5 Digitized Images Appear Dark

The master file `Modality.dic` contains a parameter that provides a number of settings that influence the conversion from the original file format to TARGA™ format. See the **V*IST*A** Imaging DICOM Gateway Installation Guide for a complete description of these parameters.

Pay special attention to the (sub)parameter **Bnnn**. When the number of bits specified by this parameter is incorrect, the resulting images may appear with a severely reduced number of gray-values, typically showing extremely dark colors.

1.10.6 Modality Worklist Find Failure

The registration of a modality's AE Title in the master file `Worklist.DIC` must be an exact match with the string that the modality transmits. This value is case-sensitive.

After the master file Worklist.DIC has been corrected, verify that the values in the master files `Instrument.DIC` and `Modality.DIC` are also correct, and be sure to re-load any modified master files into the database.

1.11 Failover Procedure

It is possible to allow a gateway processor to take over the tasks of another, in case one of the gateways should fail. In order to allow for a smooth "fail-over", take the following steps:

1. Add the TCP/IP address of the ***failed*** gateway to the substitute gateway processor. This will be the ***second*** IP address on the substitute gateway's Network Interface Card (NIC).

2. On the substitute gateway, open the folder that contains the instruments for the failing gateway and click on the modality icons within that folder to begin listening for the modalities on their respective ports. The substitute gateway can continue to work with its "regular" icons for the modalities that already were assigned to that processor.

Nothing will have to change on the modality configuration. It will be completely "transparent" to the modality. There might be a small performance degradation, however, and the screen will certainly be more busy.

1.12 Error Messages from V*IST*A Imaging DICOM Gateway Executable Programs

1.12.1 Error Messages from MAG_CSTORE.EXE

The program `MAG_CSTORE.EXE` maintains a TCP socket connection with an image acquisition device on one side and with a MUMPS Server on the other side. It processes bi-directional data streams that are encoded according the DICOM standard and causes image files to be stored on its host-PC. It is called with the following parameters:

```
Mag_cstore <IP address> <port> <modality> [<debug level>]
```

Parameter	**Meaning**
IP address	For the **V*IST*A** Imaging DICOM Gateway, this value is always "**localhost**".
Port	For the **V*IST*A** Imaging DICOM Gateway, the port number for the on which the MUMPS Server listens, which is always **60000**.
Modality	An abbreviation for the name of the instrument that is sending the images, typically a code like "**CR1**", "**CT3**", …
Debug Level	A code that indicates the verbosity of debug messages: **0**=none, **1**=some, **2**=lots

The program `MAG_CSTORE.EXE` can produce the following error codes:

Error: Could not connect to the MUMPS storage controller
Error in reading PDU header -- connection dropped

Error in reading dataset -- connection dropped
Error in writing echo response -- connection dropped
Error in reading control dataset -- connection dropped
The WinSock initialization has failed
Error writing control PDU to disk
Error writing control PDU to DICOM socket
Error reading PDV header
Error reading PDV data, *nnn* bytes input
Disk read error in net_write_data()
Unknown disk read error in net_write_data()
Error writing PDU hdr to socket
Error writing PDV hdr to socket
Error writing DATA PDU to socket
select() error in network_read()
Error in network_read(), total read: *nnn*, errno=*nnn*
MS NT Socket Error #*nnn*
select() error in network_write()
Error in network_write(), Error Number: *nnn*
Socket initialization error in init_client()
Connect error in init_client()
ioctlsocket() (non-block) error in init_client()
ioctl() (non-block) error in init_client()
setsockopt(SO_LINGER) error in init_client()
socket() error in init_server()
gethostid() error in init_server()
bind() error in init_server
Could not listen on the DICOM port because it is already in use
listen() error in init_server()
ioctlsocket() (non-block) error in init_server()
ioctl() (non-block) error in init_server()
select() error in init_server()
accept() error in init_server()
setsockopt(SO_LINGER) error in init_server()
MUMPS length network_read() error: *nnn*
MUMPS message network_read() error: *nnn*
Disk Read error
Unknown read error
Write error: number_written= *nnn* count= *nnn*
Unknown write error
Error: Incorrect Message *xxx* It should have been *xxx*
Error: No additional MUMPS partitions are available
Error Reading PDU Header

1.12.2 Error Messages from MAG_DCMTOTGA.exe

The program `MAG_DCMTOTGA.exe` reads files that are encoded according to the DICOM standard and produces files in TARGA™ format. It is called with the following parameters:

```
MAG_DCMTOTGA {input filename} {output filename} {parameter(s)}
```

Parameter	**Meaning**
A*nnn*	Add *nnn* to each pixel (before min/max check)
B*nnn*†	Number of bits in a pixel (stored in the TARGA™ header)
C*nnn*	Ceiling (maximum) pixel value (any value > *nnn* becomes nnn)
F*nnn*	Floor (minimum) pixel value (any value < *nnn* becomes *nnn*)
I	Invert each pixel
O*nnn*†	Byte offset in DICOM file to image
R1	Reduce the size of the image file a factor of two (a two-byte 8-bit pixel is stored in one byte, loss-less)
R2	Reduce the size of the image file a factor of two (a two-byte 16-bit pixel is stored as one byte, usually not loss-less)
R4	Reduce the size of the image file a factor of four (a square of four 16-bit pixels is averaged and stored in two bytes (16 bits) as one pixel, definitely not loss-less)
R8	Reduce the size of the image file a factor of eight (a square of four 16-bit pixels is averaged and stored in one byte as one pixel, definitely not loss-less)
S*nnn*	Subtract *nnn* from each pixel (unsigned arithmetic -- before add)
X*nnn*†	X-dimension of image (horizontal width or number of columns)
Y*nnn*†	Y-dimension of image (vertical height or number of rows)
† - Required	*nnn* represents an unsigned integer number

The environment variable `MAG_DCMTOTGA_VERBOSE` may be used to override the default settings:

`MAG_DCMTOTGA_VERBOSE=1`	Selects brief verbose mode
`MAG_DCMTOTGA_VERBOSE=2`	Selects total verbose mode
`MAG_DCMTOTGA_VERBOSE=3`	Turns on density histogram

The program `MAG_DCMTOTGA.exe` can produce any of the following error codes:

-1	End of Input File
-2	Read Error detected by `ferror()`
-3	End of Output File
-4	Write Error detected by `ferror()`
-5	Maximum number of columns exceeded
-999	Unknown Error

1.12.3 Error Messages from MAG_ABSTRTGA.exe

The program `MAG_ABSTRTGA.exe` reads files that are encoded in Targa™ format and produces reduced resolution (thumbnail, abstract) copies of these files. It is called with the following parameters:

```
MAG_ABSTRTGA.c {input filename} {output filename} [/s:x,y] [/8]
```

Parameter		Meaning
/s:x,y	(Optional)	Modify the maximum X and Y dimensions.
/8	(Optional)	Force all black & white (monochrome) pixels to be 8-bits

The following environment variables can override the default settings:

`ABSTR_VERBOSE=1`	Select verbose mode
`ABSTR_MAX_X=`*nnn*	Maximum X dimension is *nnn*
`ABSTR_MAX_Y=`*nnn*	Maximum Y dimension is *nnn*

The program `MAG_ABSTRTGA.exe` can produce any of the following error codes:

-1	End of Input File
-2	Read Error detected by `ferror()`
-3	End of Output File
-4	Write Error detected by `ferror()`
-5	Maximum number of columns exceeded
-999	Unknown Error

1.12.4 Error Messages from MAG_DCM_COPY.exe

The program `MAG_DCM_COPY.exe` is typically called when the DICOM header is being updated either to change from Explicit VR to Implicit VR or when the values of the attributes are being changed. It is called with the following parameters:

```
Mag_dcm_copy {input file} {output file} {input offset} {number of bytes to copy}
```

Parameter	Meaning
Offset	The byte address where the copy program starts reading
Number of Bytes	The number of bytes to be copied to the output file. (Any information to be copied is appended to the output file.)

The program `MAG_DCM_COPY.exe` can produce any of the following error codes:

-1	End of Input File
-2	Read Error detected by `ferror()`
-3	End of Output File
-4	Write Error detected by `ferror()`
-999	Unknown Error

1.12.5 Error Messages from MAG_TGATODCM.exe

The program `MAG_DCMTOTGA.exe` reads files in TARGA™ format and produces files that are encoded according to the DICOM standard. It is with the following parameters:

```
Mag_tgatodcm {input filename} {output filename} {number of bytes
                              to copy}
```

The program `MAG_TGATODCM.exe` can produce any of the following error codes:

-1	End of Input File
-2	Read Error detected by `ferror()`
-3	End of Output File
-4	Write Error detected by `ferror()`
-999	Unknown Error

1.13 Run Time MUMPS Error Messages

1.13.1 The system error log

The system error log contains a list of any errors that have occurred within the MSM system. It is good practice to review this log on a regular basis and to report important errors.

Some entries in the error log are the result of the normal operation of the system and can be ignored. Entries that fall in this category are itemized below.

Some error codes may occur under multiple circumstances, and hence may appear in more than one of the sections below.

1.13.2 Errors <INRPT> and <KLJOB>

A user interrupted a program by typing “Control-C” (<INRPT>), or a system manager terminated a job (<KLJOB>).

While it may be useful for statistical purposes to keep track of such events, these error messages can be ignored while scanning the error log for serious problems.

1.13.3 Errors <DKRES>, <DKFUL>, <DKSER> and <DBDGD>

Databases, like many other resources, have a tendency to fill up. The DICOM database (stored in **c:\msm\dicom.msm**) is created as a file of 20 MB, and should never become completely full.

When the database completely fills up, it is usually because some internal “clean up” process did not function properly and did not remove redundant information.

<DKRES> is the “early” warning that a database is “almost full”. It is important to call for support when this error is reported.

When the error message **<DKFUL>** appears, this means that the database is physically full, and that there is information that could not be written to the database. As a result, later attempts to read from the database may find corrupted information.

Error messages like **<DKSER>** and **<DBDGD>** indicate that the database has become physically damaged, and the system cannot be used until after it has been repaired properly.

1.13.4 Error <DKHER>

This message indicates that there is a hardware problem with the disk that holds the database.

A typical cause for this error is that a cable that connects the disk drive to other components of the computer has become detached. Re-attaching the cable would resolve the problem in such cases.

On occasion, this error message means that the physical magnetic platter in the disk drive is damaged. When this occurs, only a physical replacement of the disk drive can resolve the problem. Data will have to be restored from a backup in such cases.

1.13.5 Error <SYSTM>

This error indicates that an internal error has occurred within the MSM system. Errors of this type need to be reported to the vendor of the MSM product.

Contact the support organization, so that enough information about the circumstances can be collected to allow the support organization to report the problem.

1.13.6 Errors <ASYNC>, <DSCON>, <DSTDB>, <NOSYS>, and <DDPER>

In a networked system, connections are created, terminated and recreated continually. When a connection is temporarily lost, any of these error messages may be added to the error log.

Although it would be “better” if these error messages would never appear, these messages do not indicate intrinsic problems with the software.

1.13.7 Errors <NOPGM> and <PLDER>

This error indicates that a program was invoked that is not loaded into the application database (<NOPGM>) or improperly loaded (<PLDER>).

Typically, this error means that a software component was not installed completely. In such cases, it is useful to contact the support organization, so that they may assist in the proper installation of the defective software component.

In other cases, this error may indicate a spelling error in the name of a program, and the problem resolution would require a “bug fix”.

1.13.8 Errors <NOUCI> and <NOSYS>

These errors indicate that a reference is made to a database resource that is not currently available. Typically, this means that a "global variable translation" is not set up properly (see the section about setting up "**global variable translation tables**" in the Installation Guide).

1.13.9 Error <PROT>

This error indicates that the application software attempted an action for which no permission was granted.

Typically, this means that one of the steps involving the installation of a system component was not completed successfully. In such cases, contact the support organization, so that they may assist in the proper installation of the software component in question.

In some cases, this error message may appear after a system was shutdown improperly (a power-off, no emergency shutdown), causing corruption in the BIJ (Before Image Journaling) file.

If there are no errors in the error file (`Do ^%ER`) and the BIJ file is not corrupt, try restarting the MSM console and then the gateway functions. Sometimes it's just a momentary network failure.

If the Before Image Journal file is corrupt, it will need to be rebuilt. Use the following steps to rebuild the file:

1. Login in programming mode as MGR using the MSM console window.
2. Terminate all telnet processes.
3. Verify that your task is the ONLY active MUMPS process on the system (`Do ^%SS`)
4. Terminate all remaining background server processes (`Do ^KILLJOB`, option 3).
5. Dismount the DICOM database (`Do ^DBMAINT`, option 5)
6. Turn off journaling temporarily (`Do ^BIJ`, option 2, file name is `x:\msm\dicom.msm`)
7. Mount the DICOM database (`Do ^DBMAINT`, option 4)
8. Turn on journaling (`Do ^BIJ`, option 1, database is `DCM`).

When these steps are done, the program will report that journaling will be re-activated the next time that the database is mounted. At this point, shut down MSM and restart it, so that all background processes will be running again.

1.13.10 Errors <PGMOV>, <STKOV> and <ZSAVE>

The following errors indicate that a resource in the MSM configuration is exhausted:

<PGMOV> and <ZSAVE> occur when the partition size is not large enough (see the Installation Guide for instructions to establish the proper partition size).

<STKOV> occurs when one of the internal memory stacks is exhausted (see the Installation Guide for instructions to establish the proper stack size).

1.13.11 Errors <BKERR>, <CLOBR>, <ISYNT>

These errors may occur as a side-effect of programmers modifying code in an operational environment and do not indicate any errors in the software.

1.13.12 Error <MODER>

This error indicates that an attempt was made to access a file in a manner other than requested when the file was opened. Typically, this means that an attempt was made to write to a "read-only" file, or to read from an "output" file.

Often, however, this error indicates that an attempt was made to read from a non-existent file.

1.13.13 Error <MTERR>

This error indicates that an error occurred with a magnetic tape device. Such errors are typically hardware related errors (e.g., tape full, parity error, unit went off-line).

Contact the support organization for a proper analysis and resolution of the problem.

1.13.14 Error <ZSVGP>

This error indicates that the database was not created properly, and does not allow for any programs to be stored in it. See the Installation Guide for instructions on creating a database.

1.13.15 Errors <NMSPC>, <NOJRN>, <SPOOL> and <XCALL>

These errors indicate that a system component is not set up properly.

In the current release of the **V*IST*A** Imaging DICOM Gateway, these components are not used.

1.13.16 Any other code like <XXXXX>

Any other code that is spelled as 4 or 5 upper case characters between two angle brackets typically indicates that there is an error in one of the application programs.

Currently defined codes of this type are:

<BADCH>, <CMMND>, <DIVER>, <DPARM>, <ECODE>, <EXPER>, <FUNCT>, <INDER>, <LINER>, <MERGE>, <MINUS>, <INHIB>, <LCNSE>, <MAPER>, <MODER>,

<MWAPI>, <MXMEM>, <MXNUM>, <MXSTR>, <NAKED>, <NOPEN>, <NOPGM>, <OBJCT>, <PCERR>, <SBSCR>, <SYNTX>, <TXPER>, <UNDEF>, <VWERR>, <XCALL> and <Zxxxx>.

Contact the support organization. They will typically ask for more detailed information, so that a "bug fix" may be prepared.

1.14 DICOM error messages

1.14.1 Error message: $ZE=<STKOV>BTXT+2^DIALOG:::6:6:

Problem: This error may occur while attempting to correct images, and while trying to input data into a field that does not exist in the FileMan Data Dictionary on the **V*IST*A** side.

Solution: Have site install the latest KIDS application and restart the process images procedure.

Note: This error will only occur during the process of corrected images because the exclusive kill does not take place during this process.

1.14.2 Error message "Port in Use" or "Port Unavailable"

This message indicates that multiple processes are contending for the same socket. The resolution of this problem is usually fairly simple.

First try to simply close the C-Store window that displays the error message. Check that there is no other C-Store session active that is attempting to run the same program for the same instrument. If there is, that other session is probably successfully using the port that the former one could not obtain. If there is no other session attempting to run the same task, try to start it by double-clicking on its icon. This usually resolves the problem.

If the problem persists, wait until the Image Gateway is not actively processing images (all active windows show the "idle" indicator). Close the windows that display the "idle" indicator one by one. When no more telnet sessions are active, shut down MSM and restart MSM. Once MSM is running again, restart all telnet sessions.

If, after this, the problem still persists, wait until the Image Gateway is not actively processing images (all active windows show the "idle" indicator). Close the windows that display the "idle" indicator one by one. When no more telnet sessions are active, shut down MSM. Once MSM is shut down, shut down Windows™ as well. Power down the PC, wait 20 seconds, and power it up again, Restart Windows™, login using the appropriate username and password and restart MSM. Once MSM is running again, restart all telnet sessions.

If, after this, the problem still persists, log a NOIS call.

1.15 Signing on to the GUI

When a user signs on into the GUI version of the **V*IST*A** Imaging software and the user has a

Radiology classification as a resident and/or staff, the Kernel Broker login software will execute a Radiology routine that counts the number of "unverified reports". In hospitals where it is not common practice that all staff members verify their radiology reports, the number of reports with a status of "waiting for action" can grow extremely large. Such a count may keep the user waiting for a successful login for several minutes. Routine ^RAUTL3 is the called routine that counts the number of radiology reports requiring action by the user who is currently logging on. Some sites have modified this routine to quit for GUI sign-on. Consult the Radiology developers if this problem exits or have user verify all outstanding reports, which is the standard procedure.

1.16 Dumping Files that Cannot be Processed by the Gateway Application

Occasionally, input files cannot be processed properly. The distribution kit contains a public domain "octal dump" utility program (**OD.EXE**), that may be of help in diagnosing such problems. This utility program is intended to be started from the DOS-prompt, and will accept the following parameters:

```
> od –b –A {doxn} –N number –j number –t {acdfoux} filename
```

The meaning of the various parameters is described below.

-b

This parameter means that the content of the file is to be displayed in "bytes" rather than in "words" (default, when this parameter is omitted).

-A {d,o,x,n}

This parameter indicates how the counter in the left-most column is to be displayed. Only one of the four possible sub-options may be specified:

-A d means: display the counter in decimal representation
-A o means: display the counter in octal representation (default)
-A x means: display the counter in hexadecimal representation
-A n means: do not display the counter

-N number

This parameter indicates how many bytes need to be displayed. Only the first "so many" bytes of the file will be displayed, where "so many" is the number indicated by this parameter.

Note: The value of this parameter is written in decimal representation.

-j number

This parameter indicates where in the input file, the program is to start displaying characters. The program will start at the character indicated by the value of "number" in this parameter. Note: the value of this parameter is written in decimal representation.

-t {a,c,d,f,o,u,x}

When this parameter is omitted, the utility program will only display the numeric values of the various characters in the file. When additional information is desired, this parameter may be used to indicate which additional information should be displayed:

`-t a` means: display all ASCII characters
`-t c` means: display only printable ASCII characters
`-t d` means: display decimal representation
`-t f` means: display floating point representation
`-t o` means: display octal representation
`-t u` means: display unsigned decimal representation
`-t x` means: display hexadecimal representation

Example:

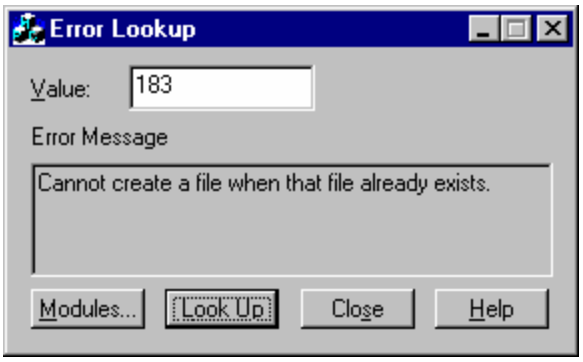
```
C:\DICOM\DICT>od -N 80 -j 50 -b -A d -t c instrument.dic <Enter>
0000000050   162 151 160 164 151 157 156 174 111 156 163 164 151 164 165 164
               r   i   p   t   i   o   n   |   I   n   s   t   i   t   u   t
0000000066   151 157 156 040 116 141 155 145 174 111 155 141 147 151 156 147
               i   o   n       N   a   m   e   |   I   m   a   g   i   n   g
0000000082   040 123 145 162 166 151 143 145 174 120 157 162 164 174 015 012
                   S   e   r   v   i   c   e   |   P   o   r   t   |  \r  \n
0000000098   043 040 111 155 141 147 151 156 147 040 163 145 162 166 151 143
               #       I   m   a   g   i   n   g       s   e   r   v   i   c
0000000114   145 163 040 141 162 145 040 144 145 146 151 156 145 144 040 141
               e   s       a   r   e       d   e   f   i   n   e   d       a
0000000130

C:\DICOM\DICT>
```

1.17 Microsoft Windows Error Code

In some cases, the system reports an error number. Such error numbers are typically returned by platform-specific system calls. Usually, the software will display both the error code and the meaning. If a code, but no meaning is displayed, the program "**ErrLook**" may be of help to find out the meaning of the code.

The program "`ErrLook.exe`" is stored in the following directory so that is always in an accessible "execution path": `\Program Files\VistA\Imaging\DICOM.`

When this program is started, it asks for an error code number. When a number is entered, click on the button labeled "**Look Up**" to display the meaning of the code.



1.18 Run Time Errors Reported by the DICOM Gateway

For ease of use, all of these errors are alphabetically listed in the Index under the heading "Run Time Error".

1.18.1 DICOM Association Errors

These errors are non-recoverable protocol violations on the part of the peer DICOM application entity. They cause both the association and the communications task to be terminated.

1.18.1.1 Unexpected "DATA" PDU

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** PDU is out of sequence.                                                 ***
*** PDU Type is 04, data.                                                   ***
***                                                                         ***
*** Routine: ^MAGDACR1                        Please Call Support Personnel ***
*******************************************************************************
```

This error occurs when an unexpected DICOM message is encountered during the lower-level communication "handshaking" with a peer application entity. (A PDU is a **P**rotocol **D**ata **U**nit.)

1.18.1.2 Peer application entity Requests "Abort Association"

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** PDU Type is 07, abort association.                                      ***
***                                                                         ***
*** Routine: ^MAGDACR1                        Please Call Support Personnel ***
*******************************************************************************
```

The peer application entity is requesting to terminate the communication. **V*IST*A** terminates the communications task.

1.18.1.3 DICOM Association – Invalid Protocol Identifier

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** Expected protocol version 1.                                            ***
*** Found "xxxxxxxxxx".                                                     ***
***                                                                         ***
*** Routine: ^MAGDACR1                        Please Call Support Personnel ***
*******************************************************************************
```

The DICOM protocol version is exchanged during the initial negotiation of the association. The only legal DICOM protocol is “Version 1”.

1.18.1.4 Opcode for Unsupported Operation

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** No subroutine for opcode: "xxxxxxxxxx".                                 ***
***                                                                         ***
*** Routine: ^MAGDACR1/3                      Please Call Support Personnel ***
*******************************************************************************
```

This error occurs when an unexpected association sub-item field is presented by a calling application entity negotiating an association with **V*IST*A**. This is possibly a violation of the DICOM standard. It is a problem that a user cannot resolve and that must be reported to the **V*IST*A** Imaging Project Team. The error message will include the offending opcode code.

1.18.1.5 DICOM Association – Invalid DICOM Standard UID

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** Expected UID for "DICOM Application Context Name",                      ***
*** which is "1.2.840.10008.3.1.1.1".                                       ***
*** Found "xxxxxxxxxx".                                                     ***
***                                                                         ***
*** Routine: ^MAGDACR3                        Please Call Support Personnel ***
*******************************************************************************
```

The DICOM Standard UID is exchanged during the initial negotiation of the association. The only legal value for DICOM is “1.2.840.10008.3.1.1.1”.

1.18.1.6 Invalid Context Identifier

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** Context ID should be an odd number.                                     ***
*** The number encountered is "xxxxxxxxxx".                                 ***
***                                                                         ***
*** Routine: ^MAGDACR3                        Please Call Support Personnel ***
*******************************************************************************
```

DICOM Presentation Context IDs are odd numbers in the range 1:255. If an even number is

presented, it is an error.

The error message will include the number specified.

1.18.1.7 Invalid Sub-Type

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** Expected sub-type 51(hex) is missing.                                   ***
*** Found "xxxxxxxxxx" instead.                                             ***
***                                                                         ***
*** Routine: ^MAGDACR3                          Please Call Support Personnel ***
*******************************************************************************
```

The **V***IST***A** Imaging DICOM Gateway found a “User Information Item Field (Item-type 50H)” in an association request. The user data field of must contain Item-type 51H, and did not. The error message will include the incorrect hexadecimal value specified.

1.18.1.8 Illegal Unique Identifier (UID)

```
*******************************************************************************
*** ERROR IN DICOM UNIQUE IDENTIFIER DICTIONARY                             ***
***                                                                         ***
*** The UID Dictionary is not properly setup!                               ***
*** There is no entry in the UID dictionary for "xxxxxxxxxx"                ***
***                                                                         ***
***                                                                         ***
*** Routine: ^MAGDUID1                          Please Call Support Personnel ***
*******************************************************************************
```

The UID dictionary must contain the proper entries in order for the gateway applications to operate properly. This error is probably caused by an old version of the dictionary being loaded. Load the current version.

1.18.2 Storage Provider Error – Unexpected Response

```
*******************************************************************************
*** ERROR IN STORAGE SERVICE                                                ***
***                                                                         ***
*** Expected return value "STORAGE COMPLETE",                               ***
*** Received "xxxxxxxxxx".                                                  ***
***                                                                         ***
*** Routine: ^MAGDCST1                          Please Call Support Personnel ***
*******************************************************************************
```

The C-Store task running in the foreground sent an unexpected message to the MUMPS Storage Controller. It should have sent “STORAGE COMPLETE”. The erroneous text is displayed in the error message.

This error is fatal and causes the DICOM Storage Provider to terminate.

1.18.3 Errors Encountered in Reading/Writing DICOM Messages

1.18.3.1 Unsupported Value Representation (Input)

```
*****************************************************************************
*** DICOM GATEWAY ERROR                                                   ***
***                                                                       ***
*** Undefined value representation: "xxxxxxxxxx".                         ***
***                                                                       ***
*** Routine: ^MAGDDR3                          Please Call Support Personnel ***
*****************************************************************************
```

This error may occur during the reading of a DICOM message. This error occurs when a data element is encountered to have a "value representation" that is not recognized by the **V***IST***A** Imaging DICOM Gateway software (All legal DICOM value representations are handled by **V***IST***A** Imaging DICOM Gateway software).

The error message will contain the code for the offending value representation. The erroneous message will have to be skipped.

1.18.3.2 Value Representation Mismatch

```
*****************************************************************************
*** DICOM TEXT GATEWAY ERROR -- WRITING DICOM FILE                        ***
***                                                                       ***
*** VR Mismatch                                                           ***
*** Requested Value Representation="xxxxxxxxxx", Dictionary="xxxxxxxxxx".  ***
*** Group: xxxxxxxx, Group Owner: xxxxxxxx  Element: xxxxxxxx (xxxxxxxxxx) ***
***                                                                       ***
*** Routine: ^MAGDDW3                          Please Call Support Personnel ***
*****************************************************************************
```

This error may occur when trying to re-generate an Explicit VR image header where the VR specified for an element by a vendor is not in agreement with the DICOM Standard.

The error message will contain the offending value representation, as well as the list of value representations that is specified in the DICOM Data Dictionary. The error message will include identify the offending element.

1.18.3.3 Required Type 1 Data Item Missing

```
*****************************************************************************
*** DICOM TEXT GATEWAY ERROR -- WRITING DICOM FILE                        ***
***                                                                       ***
*** REQUIRED TYPE 1 DATA MISSING                                          ***
*** Group: xxxxxxxx, Group Owner: xxxxxxxx  Element: xxxxxxxx (xxxxxxxxxx) ***
***                                                                       ***
*** Routine: ^MAGDDW3                          Please Call Support Personnel ***
*****************************************************************************
```

This error occurs when a required element's value is not provided, while formatting a DICOM message. The error message will include identify the offending element.

This is usually a caused by a programming error that an user cannot resolve and that must be reported to the **V*IST*A** Imaging Project Team.

1.18.3.4 Unsupported Value Representation (Output)

```
*****************************************************************************
*** DICOM TEXT GATEWAY ERROR -- WRITING DICOM FILE                          ***
***                                                                         ***
*** ERROR -- Undefined value representation: xxxxxxxxxx                     ***
***                                                                         ***
*** Routine: ^MAGDDW4                          Please Call Support Personnel ***
*****************************************************************************
```

This error may occur during the writing of a DICOM message. This error occurs when a data element is encountered to have a “value representation” that is not recognized by the **V*IST*A** Imaging DICOM Gateway software. (All legal DICOM value representations are handled by **V*IST*A** Imaging DICOM Gateway software.)

This is usually a caused by a dictionary file or programming error that a user cannot resolve and that must be reported to the **V*IST*A** Imaging Project Team.

The error message will contain the offending value representation.

1.18.4 Modality Worklist – Invalid SOP Class (C-Find)

```
*****************************************************************************
*** ERROR IN C-FIND                                                         ***
***                                                                         ***
*** Expected SOP Class "Modality Worklist Information Model – FIND          ***
*** Found "xxxxxxxxxx".                                                     ***
***                                                                         ***
*** Routine: ^MAGDFND1                         Please Call Support Personnel ***
*****************************************************************************
```

This error may occur while processing a C-Find request. As part of the message, the client specifies the name of the SOP class, which defines the context for the entire transaction. This error occurs when the name of this SOP class is not recognized. (Currently, only the SOP class “Modality Worklist Information Model – FIND” is recognized.) This is an error on the part of the application entity that issued the C-Find request.

The error message will include the name of the class that is specified by the client. This is a fatal error that terminates the association.

1.18.5 HL7 Error Messages

HL7 messages are generated on the main **V*IST*A** hospital system in the ^MAGDHL7 global. They are read by the Text Gateway and used to update the Modality Worklist database ^MAGDWLST global and to create the DICOM messages that are sent to commercial PACS.

All of these errors are detected while reading and processing them. Bad HL7 message can be bypassed by incrementing the HL7 pointer.

1.18.5.1 Bad HL7 Message Header

```
*******************************************************************************
*** DICOM TEXT GATEWAY -- HL7 DATA ERROR                                    ***
***                                                                         ***
*** Error: BAD HL7 MESSAGE HEADER                                           ***
***                                                                         ***
*** HL7 message header should start with "MSH",                             ***
*** starts with "xxx".                                                      ***
***                                                                         ***
*** Routine: ^MAGDHR1/1A                      Please Call Support Personnel ***
*******************************************************************************


*******************************************************************************
*** BAD HL7 MESSAGE HEADER                                                  ***
***                                                                         ***
*** HL7 message header should start with "MSH",                             ***
*** starts with "xxx".                                                      ***
***                                                                         ***
*** Routine: ^MAGDHRP                         Please Call Support Personnel ***
*******************************************************************************
```

Each HL7 message should start with the prefix “MSH”. These errors will occur when the DICOM Text Gateway detects a message that does not start with this prefix. It indicates a badly garbled message that cannot be further processed.

1.18.5.2 Incomplete HL7 Message

```
*******************************************************************************
*** DICOM TEXT GATEWAY -- HL7 DATA ERROR                                    ***
***                                                                         ***
*** Incomplete copy of HL7 message encountered.                             ***
*** In message number “nnn”,                                                ***
*** segment number “mmm” is missing.                                        ***
***                                                                         ***
*** Routine: ^MAGDHR2                         Please Call Support Personnel ***
*******************************************************************************
```

A portion of the HL7 message is missing, due to a problem on the main hospital system. The incomplete message will have to be bypassed manually.

1.18.5.3 Bad Fillers Order Number

```
*******************************************************************************
*** DICOM TEXT GATEWAY -- HL7 DATA ERROR                                    ***
***                                                                         ***
*** HL7 consult processing detected a bad “Fillers Order #”                 ***
*** OBR-3 contained="xxxxxxxxxx".  It should have been “GMRC”               ***
***                                                                         ***
*** Routine: ^MAGDHR4A                        Please Call Support Personnel ***
*******************************************************************************
```

This might occur if the message for the consult/procedure request is incorrectly formatted. Please call the VistA Imaging Support Desk.

1.18.6 DICOM Image Processing Errors During Input

These errors in processing a DICOM image may indicate database corruption and may require manual intervention. Maybe the image processing pointer can be incremented to bypass offending images until the problem can be resolved.

When this type of error occurs, it usually indicates a serious database inconsistency. Report it immediately to the **V*IST*A** Imaging Project Team.

1.18.6.1 Undefined Imaging Service

```
*****************************************************************************
***  DICOM IMAGE PROCESSING ERROR                                         ***
***                                                                       ***
***  Undefined Imaging Service: xxxxxxxxx                                 ***
***                                                                       ***
***  Routine: MAGDIR81                          Please Call Support Personnel ***
*****************************************************************************
```

This error is due to an erroneous Imaging Service field in the INSTRUMENT.DIC file. Legal values are “RAD” and “CON”.

1.18.6.2 File 2005 Corruption Problem

```
*****************************************************************************
***  Wed 12:09 DICOM IMAGE PROCESSING ERROR - FILE 2005 CORRUPTION        ***
***                                                                       ***
***  The ^MAG(2005) file has been corrupted so that new images will       ***
***  overwrite old ones and general image database inconsistency          ***
***  will result.                                                         ***
***                                                                       ***
***  Latest internal entry number processed: 102158 Wed SEP 20, at 11:40  ***
***  Bad ^MAG(2005,0) internal entry number: 102146                       ***
***  Image Gateway: "VistA DICOM Gateway Development System"              ***
***                                                                       ***
***            This is a VERY SERIOUS ERROR.  Image processing            ***
***                will be halted until it is resolved.                   ***
***                                                                       ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                       ***
***  Routine: MAGDIR84                                                    ***
*****************************************************************************
```

The image processing task has determined that the most recent internal entry number contained in the ^MAG(2005,0) node has been decremented. This could have been caused by restoring previously saved copy of the ^MAG global without applying the journal files. This is a VERY SERIOUS ERROR since it would allow new images to overwrite old ones, resulting in general corruption of the **V*IST*A** Imaging database. Please contact IRM and the National Help Desk immediately.

1.18.6.3 Radiology Report File Corruption Problem

```
*************************************************************************
***  Wed 07:02 DICOM IMAGE PROCESSING ERROR - ^RARPT FILE CORRUPTION     ***
***                                                                      ***
***  The RAD REPORT file has been corrupted so that new reports will     ***
***  overwrite old ones and general image/report database inconsistency  ***
***  will result.                                                        ***
***                                                                      ***
***  Latest internal entry number processed: 77710 SEP 11 at 09:51:39    ***
***  Bad ^RARPT(0) internal entry number: 77643                          ***
***  Image Gateway: "VistA DICOM Gateway Development System"             ***
***                                                                      ***
***            This is a VERY SERIOUS ERROR.  Image processing           ***
***                will be halted until it is resolved.                  ***
***                                                                      ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP    ***
***                                                                      ***
***  Routine: ^MAGDIR84                                                  ***
*************************************************************************
```

The image processing task has determined that the most recent internal entry number contained in the ^RARPT(0) node has been decremented. This could have been caused by restoring a previously saved copy of the ^RARPT global without applying the journal files. This is a VERY SERIOUS ERROR since it would allow new images to overwrite old ones, resulting in general corruption of the **V*ISTA*** Imaging database. Please contact IRM and the National Help Desk immediately.

1.18.6.4 Group Entry Number Problem

```
*************************************************************************
***  Wed 13:07 DICOM IMAGE PROCESSING ERROR - GROUP ENTRY NUMBER PROBLEM  ***
***                                                                      ***
***  The internal entry number for this group is less than that of the    ***
***  last processed image.  This will cause new images to overwrite       ***
***  old ones and general image database inconsistency will result.       ***
***                                                                      ***
***  Latest internal entry number processed: 102158 Wed SEP 20, at 11:40  ***
***  Bad internal entry number of new group: 102100                      ***
***  Image Gateway: "VistA DICOM Gateway Development System"             ***
***                                                                      ***
***            This is a VERY SERIOUS ERROR.  Image processing           ***
***                will be halted until it is resolved.                  ***
***                                                                      ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                      ***
***  Routine: MAGDIR9A and MAGDIR9E                                      ***
*************************************************************************
```

The image-processing task has determined that the internal entry number of the new group is less than the most recently created entry. This could have been caused by restoring a previously saved copy of the ^MAG global without applying the journal files. This is a VERY SERIOUS ERROR since it would allow new images to overwrite old ones, resulting in general corruption of the **V*ISTA*** Imaging database. Please contact IRM and the National Help Desk immediately.

1.18.6.5 Image Entry Number Problem

```
*****************************************************************************
***  Wed 12:38 DICOM IMAGE PROCESSING ERROR - IMAGE ENTRY NUMBER PROBLEM  ***
***                                                                       ***
***  The internal entry number for this image is less than that of the    ***
***  last processed image.  This will cause new images to overwrite       ***
***  old ones and general image database inconsistency will result.       ***
***                                                                       ***
***  Latest internal entry number processed: 102158 Wed SEP 20, at 11:40  ***
***  Bad internal entry number of new image: 102100                       ***
***  Image Gateway: "VistA DICOM Gateway Development System"              ***
***                                                                       ***
***            This is a VERY SERIOUS ERROR.  Image processing            ***
***                will be halted until it is resolved.                   ***
***                                                                       ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                       ***
***  Routine: MAGDIR9B and MAGDIR71                                       ***
*****************************************************************************
```

The image-processing task has determined that the internal entry number of the new image is less than the most recently created entry. This could have been caused by restoring a previously saved copy of the ^MAG global without applying the journal files. This is a VERY SERIOUS ERROR since it would allow new images to overwrite old ones, resulting in general corruption of the **V*IST*A** Imaging database. Please contact IRM and the National Help Desk immediately.

1.18.6.6 Imaging Patient Mismatch Problem

```
*****************************************************************************
***  Wed 12:53 DICOM IMAGE PROCESSING ERROR - PATIENT MISMATCH PROBLEM  ***
***                                                                       ***
***  The image and the group point to different patients.                 ***
***                                                                       ***
***  The Image points to PATIENT file internal entry number 100           ***
***  SMITH,ADAM M | 123-45-6789 | M | Dec 25,1925                         ***
***                                                                       ***
***  The Group points to PATIENT file internal entry number 90271         ***
***  BAKER,JOSEPHINE | 987-65-4321 | F | Oct 31,1919                     ***
***                                                                       ***
***  Internal entry number of group: 102138                               ***
***  Image Gateway: "VistA DICOM Gateway Development System"              ***
***                                                                       ***
***            This is a VERY SERIOUS ERROR.  Image processing            ***
***                will be halted until it is resolved.                   ***
***                                                                       ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                       ***
***  Routine: MAGDIR9A, MAGDIR9B, and MAGDIR9E                            ***
*****************************************************************************
```

The image-processing task has determined that the image and the group entries would point to different patients. An unknown software problem or manual modification of the data could have caused this to occur. This is a VERY SERIOUS ERROR since it might lead to a corrupted **V*IST*A** Imaging database. Please contact IRM and the National Help Desk immediately.

1.18.6.7 Radiology Patient Mismatch Problem

```
*****************************************************************************
***  Mon 06:50 DICOM IMAGE PROCESSING ERROR - RAD PATIENT/REPORT MISMATCH  ***
***                                                                       ***
***  The image and the radiology report point to different patients.      ***
***                                                                       ***
***  The Image points to PATIENT file internal entry number 90263         ***
***  DEMO,JANE | 123-45-6789 | F | Dec. 25,1925                          ***
***                                                                       ***
***  The Rad Report points to PATIENT file internal entry number #17      ***
***  FRED,CONNERS | 987-65-4321 | M | Feb 8,1911                         ***
***                                                                       ***
***  Internal entry number of report: ^RARPT(12345)                       ***
***  Image Gateway: "VistA DICOM Gateway Development System"              ***
***                                                                       ***
***            This is a VERY SERIOUS ERROR.  Image processing            ***
***                will be halted until it is resolved.                   ***
***                                                                       ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                       ***
*** Routine: MAGDIR9A                                                    ***
*****************************************************************************
```

The image-processing task has determined that the image and the radiology report entries would point to different patients. An unknown software problem or manual modification of the data could have caused this to occur. This is a VERY SERIOUS ERROR since it might lead to a corrupted **V*IST*A** Imaging and/or Radiology database. Please contact IRM and the National Help Desk immediately.

1.18.6.8 No Radiology Case Number

```
*****************************************************************************
*** DICOM IMAGE PROCESSING ERROR                                          ***
*** No radilogy case number specified for patient xxxxxxxxxx              ***
*** Routine: ^MAGDIR9A                      Please Call Support Personnel ***
*****************************************************************************
```

A database inconsistency may exist in the Radiology package. There should be a radiology case number specified for this patient. Perhaps the case has been deleted. The DICOM Image Input pointer can be incremented to temporarily get around this problem.

1.18.6.9 Radiology Case Not in ^RADPT

```
*****************************************************************************
*** DICOM IMAGE PROCESSING ERROR                                          ***
*** Radiology case xxxxx is not in ^RADPT(yyyyyyyy)                       ***
*** Routine: ^MAGDIR9A                      Please Call Support Personnel ***
*****************************************************************************
```

The entry in the Radiology Patient File (^RADPT) for this case number appears to be missing. This may be due to a database inconsistency in the Radiology package. Perhaps the case has been deleted. The DICOM Image Input pointer can be incremented to temporarily get around this problem.

1.18.6.10 Cannot Create Group for Old Radiology Images

```
*****************************************************************************
*** DICOM IMAGE PROCESSING ERROR                                          ***
***                                                                       ***
*** IMAGE GROUP CREATION ERROR:                                           ***
*** Radiology Report has been archived and purged.                        ***
*** Patient xxxxxxxxxx, Date xxxxxxxxxx, Case xxxxxxxxxx                  ***
***                                                                       ***
*** Routine: ^MAGDIR9A                      Please Call Support Personnel ***
*****************************************************************************
```

This error may occur while attempting to enter information into the **V*IST*A** database to establish a group of images. This error happens when the image files are for a Radiology study whose reports already have been archived and purged, as may happen when films are scanned in for 'old' studies.

1.18.6.11 Cannot Create Group for New Radiology Images

```
*****************************************************************************
*** DICOM IMAGE PROCESSING ERROR                                          ***
***                                                                       ***
*** IMAGE GROUP CREATION ERROR:                                           ***
*** xxxxxxxxxx                                                            ***
***                                                                       ***
*** Routine: ^MAGDIR9A & ^MAGDIR9E          Please Call Support Personnel ***
*****************************************************************************
```

This error may occur while attempting to create a radiology image group in the **V*IST*A** database.

1.18.6.12 Cannot Find Image Group Pointer in Radiology Report

```
*****************************************************************************
*** DICOM IMAGE PROCESSING ERROR                                          ***
***                                                                       ***
*** IMAGE GROUP LOOKUP ERROR:                                             ***
*** Looking for 2005 cross reference in ^RARPT(xxxxxxxxxx)                ***
***                                                                       ***
*** Routine: ^MAGDIR9A                      Please Call Support Personnel ***
*****************************************************************************
```

This error may occur while attempting to access a radiology image group in the **V*IST*A** database.

1.18.6.13 Cannot Create Image File Entry in VistA Database

```
*****************************************************************************
*** DICOM IMAGE PROCESSING ERROR                                          ***
***                                                                       ***
*** IMAGE FILE CREATION ERROR:                                            ***
*** xxxxxxxxxx                                                            ***
***                                                                       ***
*** Routine: ^MAGDIR9B                      Please Call Support Personnel ***
*****************************************************************************
```

This error may occur while attempting to create the image entry in the **V*IST*A** database.

1.18.6.14 Cannot Create Subdirectory to Store Image File

```
*****************************************************************************
*** DICOM IMAGE PROCESSING ERROR                                          ***
***                                                                       ***
*** IMAGE FILE SUBDIRECTORY CREATION ERROR                                ***
*** Can not create the image subdirectory “xxxxxxxxxx”                    ***
*** xxxxxxxxxx                                                            ***
***                                                                       ***
*** Routine: ^MAGDIR71                        Please Call Support Personnel ***
*****************************************************************************
```

Images are stored in a hierarchy of subdirectories. This error may occur when the creation of a new subdirectory. The error message will contain the name of the directory that failed to be created. Check that the network file server is still “reachable”. Try to map a network drive to it and manually create the subdirectory using the command prompt.

1.18.6.15 Cannot Write Image File

```
*****************************************************************************
*** DICOM IMAGE PROCESSING ERROR                                          ***
***                                                                       ***
*** The writing of image file "xxxxxxxxxx" failed                         ***
*** The error message was "xxxxxxxxxx"                                    ***
***                                                                       ***
*** Routine: ^MAGDIR75                        Please Call Support Personnel ***
*****************************************************************************
```

When an image is stored on the network file server, the software checks whether the size of the created file is greater than zero. This error message is reported if the newly created file is either not created or has a zero size. Check that the network file server is still “reachable”. Try to map a network drive to it and manually copy a file using the command prompt.

Try the following steps to correct this problem:

1. From a DOS session, copy a small file to the share using the UNC path and file name for the destination. If the write fails it is usually caused by permission problems. Fix the permission problem using the Windows™ user administration tools (if necessary, find a System Administrator who has the appropriate privileges).

2. Check the available disk space on the share. If the disk space is low, run a purge on the background processor to free up space on the magnetic shares.

1.18.6.16 TIU Note Patient/Report Mismatch

```
*****************************************************************************
***  Mon 06:50 DICOM IMAGE PROCESSING ERROR - TIU PATIENT/REPORT MISMATCH  ***
***                                                                        ***
***  The image and the TIU note point to different patients.               ***
***                                                                        ***
***  The Image points to PATIENT file internal entry number 90263          ***
***  DEMO,JANE | 123-45-6789 | F | Dec. 25,1925                           ***
***                                                                        ***
***  The TIU note points to PATIENT file internal entry number #17       ***
***  FRED,CONNERS | 987-65-4321 | M | Feb 8,1911                          ***
***                                                                        ***
***  Internal entry number of TIU note: ^TIU(8925,1)                       ***
***  Image Gateway: "VistA DICOM Gateway Development System"               ***
***                                                                        ***
***            This is a VERY SERIOUS ERROR.  Image processing             ***
***                will be halted until it is resolved.                    ***
***                                                                        ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP      ***
***                                                                        ***
*** Routine: MAGDIR9E                                                     ***
*****************************************************************************
```

The image-processing task has determined that the image and the TIU note entries would point to different patients. An unknown software problem or manual modification of the data could have caused this to occur. This is a VERY SERIOUS ERROR since it might lead to a corrupted **V*IST*A** Imaging and/or TIU Note database. Please contact IRM and the National Help Desk immediately.

1.18.6.17 TIU External Data Link Association Error

```
*****************************************************************************
***  ERROR ASSOCIATING WITH TIU EXTERNAL DATA LINK (file 8925.91)          ***
***  <error message from TIU>                                              ***
***  Image Gateway: "VistA DICOM Gateway Development System"               ***
***                                                                        ***
***            This is a VERY SERIOUS ERROR.  Image processing             ***
***                will be halted until it is resolved.                    ***
***                                                                        ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP      ***
***                                                                        ***
*** Routine: MAGDIR9E and MAGDHWA                                         ***
*****************************************************************************
```

The image-processing task has encountered an error in attempting to create an association between the image and the TIU External Data Link. An unknown software problem or manual modification of the data could have caused this to occur. This is a VERY SERIOUS ERROR since it might lead to a corrupted **V*IST*A** Imaging and/or TIU Note database. Please contact IRM and the National Help Desk immediately.

1.18.6.18 Cannot Find Table with Additional Data Items

```
*****************************************************************************
*** DICOM GATEWAY ERROR                                                   ***
***                                                                       ***
*** Data transfer dictionary <<xxxxxxxxxx>> is missing                    ***
***                                                                       ***
*** Routine: ^MAGDIR7T                        Please Call Support Personnel ***
*****************************************************************************
```

The error message will include the name of the missing table.

This error may occur when the designated data transfer dictionary can not be found. This is probably either a configuration or an installation problem.

The data transfer dictionaries are **DataGECT.DIC**, **Data_CR.DIC**, and **DataMisc.DIC**, all of which should be in the **f:\DICOM\Dict** subdirectory. The **Modality.DIC** file should contain the names of the data transfer dictionaries.

The missing data transfer dictionary will be created when the information from master file **F:\DICOM\Dict\Modality.DIC** is reloaded into the database of the **V*IST*A** Imaging DICOM Gateway (use menu option 4, 2, 3, **Install MODALITY.DIC**.

If the file(s) in directory **F:\DICOM\Dict** are also missing, these can be re-copied from the distribution medium (either CD-ROM or network).

1.18.6.19 DICOM Element has Too Many Values

```
*****************************************************************************
*** DICOM GATEWAY ERROR                                                   ***
***                                                                       ***
*** Processing "xxxxxxxxxx", tag is "xxxxxxxxxx".                         ***
*** Multiplicity is "xxxxxxxxxx".                                         ***
***                                                                       ***
*** Routine: ^MAGDIR7T                        Please Call Support Personnel ***
*****************************************************************************
```

This error may occur while building the set of data elements that is to be displayed on a diagnostic workstation. Within the DICOM protocol, each data item may have 0 (zero) or more values. How many values a specific data item may have is defined in the DICOM Data Dictionary. When a data item is encountered that has more actual values than the maximum defined in the DICOM Data Dictionary, this error will occur.

The error message will identify the data stream being processed, the “tag” for the data item in question, and the actual number of values.

1.18.6.20 Image Patient Mismatch (parent file 2006.5839)

```
*****************************************************************************
***  DICOM IMAGE PROCESSING ERROR – IMAGE GROUP MISMATCH                  ***
***  The image group does not point to PARENT FILE 2006.5839.             ***
***                                                                       ***
***  The image group should point to PARENT FILE 2006.5839.               ***
***  Instead it point to PARENT FILE #nnnnnn                              ***
***  The image group is ^MAG(2005,nnnnnn)                                 ***
***                                                                       ***
***            This is a VERY SERIOUS ERROR.  Image processing            ***
***                will be halted until it is resolved.                   ***
***                                                                       ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                       ***
***  Routine: MAGDIR9E                                                    ***
*****************************************************************************
```

1.18.6.21 Image and TIU Note Associated with different Notes

```
*****************************************************************************
***  DICOM IMAGE PROCESSING ERROR – TIU/IMAGE GROUP MISMATCH              ***
***  The image group and TIU point to different notes.                    ***
***                                                                       ***
***  TIU points to TUI note ien #nnnnnn                                   ***
***  The image points to TIU note ien #nnnnnn                             ***
***  TIU External Data File (8925.91) ien #nnnnnn                         ***
***  points to image group ien #nnnnn                                     ***
***                                                                       ***
***            This is a VERY SERIOUS ERROR.  Image processing            ***
***                will be halted until it is resolved.                   ***
***                                                                       ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                       ***
***  Routine: MAGDIR9E                                                    ***
*****************************************************************************
```

1.18.6.22 Wrong Group Object Type

```
*****************************************************************************
***  DICOM IMAGE PROCESSING ERROR – WRONG GROUP OBJECT TYPE               ***
***  The group entry in ^MAG(2005) does not have the proper group         ***
***  object type.                                                         ***
***                                                                       ***
*** The expected value is 11.  The value in the group entry is nnnnnn.    ***
***                                                                       ***
***  Internal entry number of incorrect group: nnnnnn                     ***
***                                                                       ***
***            This is a VERY SERIOUS ERROR.  Image processing            ***
***                will be halted until it is resolved.                   ***
***                                                                       ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                       ***
***  Routine: MAGDIR9B                                                    ***
*****************************************************************************
```

1.18.6.23 Ignore Image File

```
*****************************************************************************
***                                                                       ***
***  Image <filename> will be ignored.                                    ***
***                                                                       ***
*****************************************************************************
```

1.18.6.24 Unknown Instrument Mnemonic

```
*****************************************************************************
***                                                                       ***
***  Image nnnnn has an unknown instrument mnemonic "xxx" skipped         ***
***                                                                       ***
*****************************************************************************
```

1.18.6.25 Rename Failed

```
*****************************************************************************
***                                                                       ***
***  Renaming oldname to newname failed.                                  ***
***                                                                       ***
*****************************************************************************
```

1.18.6.26 Image File Creation Error

```
*****************************************************************************
***                                                                       ***
***  DICOM IMAGE PROCESSING ERROR                                         ***
***                                                                       ***
***  IMAGE FILE CREATION ERROR:                                           ***
***  <error message>                                                      ***
***  Gateway: "<name>"                                                    ***
***                                                                       ***
***            This is a VERY SERIOUS ERROR.  Image processing            ***
***                will be halted until it is resolved.                   ***
***                                                                       ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                       ***
***  Problem detected by routine MAGDIR71.                                ***
***                                                                       ***
*****************************************************************************
```

1.18.6.27 Image File Subdirectory Creation Error

```
*****************************************************************************
***                                                                       ***
***  DICOM IMAGE PROCESSING ERROR                                         ***
***                                                                       ***
***  IMAGE FILE SUBDIRECTORY CREATION ERROR                               ***
***  Can not create the image subdirectory "name"                         ***
***  <error message>                                                      ***
***                                                                       ***
***  Imaging entry #nnnnn was successfully removed.                       ***
***                                                                       ***
*****************************************************************************
```

1.18.6.28 New Files Might Overwrite Existing Ones (Single)

```
*****************************************************************************
***                                                                       ***
***  DICOM IMAGE PROCESSING ERROR                                         ***
***                                                                       ***
***  IMAGE FILE CREATION ERROR - NEW FILES MIGHT OVERWRITE EXISTING ONES  ***
***  Trying to create file:                                               ***
***  "filename"                                                           ***
***                                                                       ***
***  However, this file already exists in that directory:                 ***
***  "filename"                                                           ***
***  Can not overwrite this with the image files.                         ***
***                                                                       ***
***  Imaging entry #nnnnn was successfully removed.                       ***
***                                                                       ***
***  Gateway: "<name>"                                                    ***
***                                                                       ***
***            This is a VERY SERIOUS ERROR.  Image processing            ***
***                will be halted until it is resolved.                   ***
***                                                                       ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                       ***
***  Problem detected by routine MAGDIR71.                                ***
***                                                                       ***
*****************************************************************************
```

1.18.6.29 New Files Might Overwrite Existing Ones (Multiple)

```
*****************************************************************************
***                                                                       ***
***  DICOM IMAGE PROCESSING ERROR                                         ***
***                                                                       ***
***  IMAGE FILE CREATION ERROR - NEW FILES MIGHT OVERWRITE EXISTING ONES  ***
***  Trying to create file:                                               ***
***  "filename"                                                           ***
***                                                                       ***
***  However, these nnn files already exist in that directory:            ***
***  "filename"                                                           ***
***  . . .                                                                ***
***  "filename"                                                           ***
***  Can not overwrite these with the image files.                        ***
***                                                                       ***
***  Gateway: "<name>"                                                    ***
***                                                                       ***
***            This is a VERY SERIOUS ERROR.  Image processing            ***
***                will be halted until it is resolved.                   ***
***                                                                       ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP     ***
***                                                                       ***
***  Problem detected by routine MAGDIR71.                                ***
***                                                                       ***
*****************************************************************************
```

1.18.6.30 Cannot Delete File

```
*****************************************************************************
***                                                                       ***
***  DICOM IMAGE PROCESSING ERROR                                         ***
***                                                                       ***
***  ERROR DELETING xxx                                                   ***
***  Unexpected error in <command>                                        ***
```

```
***  <error message>                                                    ***
***                                                                     ***
*** Routine: ^MAGDIR71                    Please Call Support Personnel ***
***                                                                     ***
*************************************************************************
```

1.18.6.31 Unknown Status (Patient Safety RPC)

```
*************************************************************************
***                                                                     ***
***  UNKNOWN STATUS IN "PATIENT SAFETY" RPC RESULT                      ***
***  Status = "<status>"                                                ***
***  Gateway: "<name>"                                                  ***
***                                                                     ***
***            This is a VERY SERIOUS ERROR.  Image processing          ***
***                will be halted until it is resolved.                 ***
***                                                                     ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP   ***
***                                                                     ***
***                                                                     ***
***  Problem detected by routine MAGDIR74.                              ***
***                                                                     ***
*************************************************************************
```

1.18.6.32 Rollback Error (number of returned elements)

```
*************************************************************************
***                                                                     ***
***  DICOM IMAGE PROCESSING ERROR                                       ***
***                                                                     ***
***  ROLLBACK M-to-M RPC BROKER ERROR                                   ***
***  Unexpected number of array elements returned by RPC: nnn           ***
***  <result text>                                                      ***
***  . . .                                                              ***
***  <result text>                                                      ***
***  Only one element ("ROLLBACK") should be returned                   ***
***                                                                     ***
*** Routine: ^MAGDIR75                    Please Call Support Personnel ***
***                                                                     ***
*************************************************************************
```

1.18.6.33 Rollback error (returncode)

```
*************************************************************************
***                                                                     ***
***  DICOM IMAGE PROCESSING ERROR                                       ***
***                                                                     ***
***  ROLLBACK M-to-M RPC BROKER ERROR                                   ***
***  Unexpected return from RPC: "<returncode>"                         ***
***  Expected "ROLLBACK|STATUS|IMAGEPTR"                                ***
***                                                                     ***
*** Routine: ^MAGDIR75                    Please Call Support Personnel ***
***                                                                     ***
*************************************************************************
```

1.18.6.34 Problem with Temporary File (1)

```
*************************************************************************
***                                                                     ***
***  DICOM IMAGE PROCESSING ERROR                                       ***
```

```
***                                                                          ***
***  DIRECTORY PROBLEM WITH TEMPORARY <type> IMAGE FILE (1)                  ***
***  Unexpected error in "<command>"                                         ***
***  Temporary TGA file "<filename>" not in the directory                    ***
***                                                                          ***
***  Imaging entry #nnnnn was successfully removed.                          ***
***                                                                          ***
*** Routine: ^MAGDIR75                    Please Call Support Personnel     ***
***                                                                          ***
******************************************************************************
```

1.18.6.35 Problem with Temporary File (2)

```
******************************************************************************
***                                                                          ***
***  DICOM IMAGE PROCESSING ERROR                                            ***
***                                                                          ***
***  DIRECTORY PROBLEM WITH TEMPORARY <type> IMAGE FILE (2)                  ***
***  Unexpected error in "<command>"                                         ***
***  Error "<text>" for temporary <type> file "<filename>"                   ***
***                                                                          ***
***  Imaging entry #nnnnn was successfully removed.                          ***
***                                                                          ***
*** Routine: ^MAGDIR75                    Please Call Support Personnel     ***
***                                                                          ***
******************************************************************************
```

1.18.6.36 Problem with Temporary File (3)

```
******************************************************************************
***                                                                          ***
***  DICOM IMAGE PROCESSING ERROR                                            ***
***                                                                          ***
***  DIRECTORY PROBLEM WITH TEMPORARY <type> IMAGE FILE (3)                  ***
***  Unexpected error in "<command>"                                         ***
***  Temporary <type> file "<filename>" has ZERO LENGTH                      ***
***                                                                          ***
***  Imaging entry #nnnnn was successfully removed.                          ***
***                                                                          ***
*** Routine: ^MAGDIR75                    Please Call Support Personnel     ***
***                                                                          ***
******************************************************************************
```

1.18.6.37 Image Copy Error

```
******************************************************************************
***                                                                          ***
***  DICOM IMAGE PROCESSING ERROR                                            ***
***                                                                          ***
***  <type> IMAGE COPY ERROR                                                 ***
***  Unexpected error in "<command>"                                         ***
***  <error message>                                                         ***
***                                                                          ***
*** Routine: ^MAGDIR75                    Please Call Support Personnel     ***
***                                                                          ***
******************************************************************************
```

1.18.6.38 Image Write Failed

```
******************************************************************************
```

```
***                                                                          ***
***  DICOM IMAGE PROCESSING ERROR                                            ***
***                                                                          ***
***  The writing of image file failed.                                       ***
***  Path: "<filename>"                                                      ***
***  <error message>                                                         ***
***                                                                          ***
*** Routine: ^MAGDIR75                    Please Call Support Personnel     ***
***                                                                          ***
********************************************************************************
```

1.18.6.39 Targa™ Abstract Creation Error

```
********************************************************************************
***                                                                          ***
***  DICOM IMAGE PROCESSING ERROR                                            ***
***                                                                          ***
***  TARGA IMAGE ABSTRACT CREATION ERROR                                     ***
***  Unexpected error in "<command>"                                         ***
***  <error message>                                                         ***
***                                                                          ***
***  Imaging entry #nnnnn was successfully removed.                          ***
***                                                                          ***
*** Routine: ^MAGDIR7C                    Please Call Support Personnel     ***
***                                                                          ***
********************************************************************************
```

1.18.6.40 Multiframe Image File Creation Error (number of returned elements)

```
********************************************************************************
***                                                                          ***
***  DICOM IMAGE PROCESSING ERROR                                            ***
***                                                                          ***
***  MULTIFRAME IMAGE FILE CREATION ERROR                                    ***
***  Unexpected number of array elements returned by RPC: nnn                ***
***  Element 1) <text>                                                       ***
***  . . .                                                                    ***
***  Element n) <text>                                                       ***
***  Two elements (PROCESSED and STORE) should be returned                   ***
***                                                                          ***
***  Imaging entry #nnnnn was successfully removed.                          ***
***                                                                          ***
*** Routine: ^MAGDIR7C                    Please Call Support Personnel     ***
***                                                                          ***
********************************************************************************
```

1.18.6.41 Multiframe Image File Creation Error (return code not “processed”)

```
********************************************************************************
***                                                                          ***
***  DICOM IMAGE PROCESSING ERROR                                            ***
***                                                                          ***
***  MULTIFRAME IMAGE FILE CREATION ERROR                                    ***
***  Unexpected return from RPC: "<text>"                                    ***
***  Expected "PROCESSED|location|instname|imageptr|0"                       ***
***                                                                          ***
***  Imaging entry #nnnnn was successfully removed.                          ***
***                                                                          ***
*** Routine: ^MAGDIR7C                    Please Call Support Personnel     ***
***                                                                          ***
********************************************************************************
```

1.18.6.42 Multiframe Image File Creation Error (return code not “store”)

```
*************************************************************************
***                                                                   ***
***  DICOM IMAGE PROCESSING ERROR                                     ***
***                                                                   ***
***  MULTIFRAME IMAGE FILE CREATION ERROR                             ***
***  Unexpected return from RPC: "<text>"                             ***
***  Expected "STORE|0|imageptr^topath^file"                          ***
***                                                                   ***
***  Imaging entry #nnnnn was successfully removed.                   ***
***                                                                   ***
*** Routine: ^MAGDIR7C                    Please Call Support Personnel ***
***                                                                   ***
*************************************************************************
```

1.18.6.43 Multiframe Image File Creation Error (error in command)

```
*************************************************************************
***                                                                   ***
***  DICOM IMAGE PROCESSING ERROR                                     ***
***                                                                   ***
***  DICOM IMAGE ABSTRACT CREATION ERROR                              ***
***  Unexpected error in "<command>"                                  ***
***  1) <text>                                                        ***
***  . . .                                                            ***
***  n) <text>                                                        ***
***                                                                   ***
***  Imaging entry #nnnnn was successfully removed.                   ***
***                                                                   ***
*** Routine: ^MAGDIR7D                    Please Call Support Personnel ***
***                                                                   ***
*************************************************************************
```

1.18.6.44 Targa™ File Creation Error

```
*************************************************************************
***                                                                   ***
***  DICOM IMAGE PROCESSING ERROR                                     ***
***                                                                   ***
***  TARGA IMAGE FILE CREATION ERROR                                  ***
***  Unexpected error in "<command>"                                  ***
***  1) <text>                                                        ***
***  . . .                                                            ***
***  n) <text>                                                        ***
***                                                                   ***
***  Imaging entry #nnnnn was successfully removed.                   ***
***                                                                   ***
*** Routine: ^MAGDIR7G                    Please Call Support Personnel ***
***                                                                   ***
*************************************************************************
```

1.18.6.45 Could not Open Image File for Write

```
*************************************************************************
***                                                                   ***
***  DICOM IMAGE PROCESSING ERROR                                     ***
***  Could not open about image text file "<filename>" for Write.     ***
***  STATUS: <xxx>                                                    ***
```

```
***                                                                          ***
***  Imaging entry #nnnnn was successfully removed.                          ***
***                                                                          ***
*** Routine: ^MAGDIR7T                     Please Call Support Personnel ***
***                                                                          ***
********************************************************************************
```

1.18.6.46 Data Transfer Dictionary Missing

```
********************************************************************************
***                                                                          ***
***  DICOM GATEWAY ERROR                                                     ***
***                                                                          ***
***  Data transfer dictionary <<filename>> is missing                        ***
***                                                                          ***
*** Routine: ^MAGDIR7T                     Please Call Support Personnel ***
***                                                                          ***
********************************************************************************
```

1.18.6.47 Invalid Multiplicity

```
********************************************************************************
***                                                                          ***
***  DICOM GATEWAY ERROR                                                     ***
***                                                                          ***
***  Processing "<node>", tag is "<tag>".                                    ***
***  Multiplicity is "nnn".                                                  ***
***                                                                          ***
***                                                                          ***
*** Routine: ^MAGDIR7T                     Please Call Support Personnel ***
***                                                                          ***
********************************************************************************
```

1.18.6.48 Image Entry Number Problem

```
********************************************************************************
***                                                                          ***
***  DICOM IMAGE PROCESSING ERROR - IMAGE ENTRY NUMBER PROBLEM               ***
***                                                                          ***
***  The internal entry number for this image is less than that of the       ***
***  last processed image.  This will cause new images to overwrite          ***
***  old ones and general image database inconsistency will result.          ***
***                                                                          ***
***  Latest internal entry number processed: <nnnnn>                         ***
***  Bad internal entry number of new image: <nnnnn>                         ***
***                                                                          ***
***  Gateway: "<name>"                                                       ***
***                                                                          ***
***            This is a VERY SERIOUS ERROR.  Image processing               ***
***                will be halted until it is resolved.                      ***
***                                                                          ***
***  Call IRM and the National VistA Support Help Desk (888) 596-HELP        ***
***                                                                          ***
***                                                                          ***
***  Problem detected by routine <name>.                                     ***
***                                                                          ***
********************************************************************************
```

1.18.6.49 Routing Not Actively Used

```
*********************************************************************
*** DICOM IMAGE PROCESSING ERROR                                  ***
***                                                               ***
*** More than a week has elapsed since dd-Mon-yyyy                ***
*** when the last activity occurred that is related               ***
*** to the processing of Routed Image files.                      ***
***                                                               ***
*** The site parameter for "This is a Routing Site" is            ***
*** currently turned ON.                                          ***
*** If this site is no longer actively routing image files        ***
*** this site parameter must be turned OFF.                       ***
*** This parameter needs to be turned OFF on each VistA           ***
*** DICOM Gateway that processes incoming images.                 ***
***                                                               ***
*** There are currently nnn entries                               ***
*** waiting to be processed in the evaluation queue.              ***
***                                                               ***
*** There are currently nnn entries                               ***
*** waiting to be processed in the transmission queue.            ***
***                                                               ***
*** If this site is still a routing site, then both the           ***
*** Routing Rule Evaluator and the Routing Transmitter            ***
*** must be restarted.                                            ***
*** Problem detected by routine MAGDIR82.  Error Code: -405       ***
***                                                               ***
*** MAGDIR72                        Please Call Support Personnel ***
*********************************************************************
```

This message will appear (once per day) when a DICOM Gateway is processing images, and the setting for “Routing Active” is turned on, while no files have been routed or no rule-evaluation has taken place for over a week.

When the setting for “Routing Active” is turned on, an entry will be created in the Routing Rule Evaluation Queue for each image that is processed. If no rule-evaluator is running, this queue will grow and eventually fill any available storage space. (When a rule-evaluator is running, queue entries will be deleted after they have been processed.)

The action to be taken will depend on the situation at the site: if it is intentional that routing rule evaluation and file transmission is no longer active, then the setting for “Routing Active” should be turned off.

When Routing is intended to be active, the rule-evaluator and file transmitter(s) should be restarted.

1.18.7 DICOM Image Processing Errors During Output

Images are internally stored in TARGA™ file format with an “about image text file,” which contains an ASCII version of the DICOM Header. When DICOM images are to be sent to another application entity, the DICOM images are “reconstituted” from the TARGA™ image files and the text files, and are then sent.

Like the VistA DICOM Storage Provider architecture, two processes are used to send a DICOM image, the MUMPS Transmission Controller and the C executable MAG_VISTA_SEND_IMAGE.exe.

The MUMPS Transmission Controller has managerial responsibilities for the effort and spawns the MAG_VISTA_SEND_IMAGE.exe program to transmit the actual image files. The two processes communicate with each other via TCP/IP, with the MUMPS routine instructing the C program with what to do.

1.18.7.1 Bad TARGA™ File

```
*****************************************************************************
*** DICOM GATEWAY ERROR                                                   ***
***                                                                       ***
*** Bad Targa File -- xxxxxxxxxx                                          ***
*** Neither RGB color, nor gray scale.                                    ***
*** Image Type is "xxxxxxxxxx                                             ***
***                                                                       ***
*** Routine: ^MAGDIW2                          Please Call Support Personnel ***
*****************************************************************************
```

This error may occur while re-constituting a DICOM file from a TARGA™ file and a Text file. In the TARGA™ file, a code occurs that indicates the internal “image type”. Currently, only image types “gray scale” and “RGB color” are supported. When a file with a different image type is encountered, this error will occur. ".

1.18.7.2 Cannot Establish Connection with MAG_VISTA_SEND_IMAGE

```
*****************************************************************************
*** ERROR IN VISTA SEND IMAGE                                             ***
***                                                                       ***
*** Expected return value "Connection established to MUMPS".              ***
*** Received "xxxxxxxxxx".                                                ***
***                                                                       ***
*** Routine: ^MAGDIW5                          Please Call Support Personnel ***
*****************************************************************************
```

When the **MAG_VISTA_SEND_IMAGE.exe** program is spawn by the MUMPS Transmission Controller (`^MAGDIW5`), it tries to establish a TCP/IP connection back to the MUMPS controller task. This error message denotes that this communications failed.

1.18.7.3 Connection to Destination Storage Provider Failed

```
*****************************************************************************
*** ERROR IN VISTA SEND IMAGE                                             ***
***                                                                       ***
*** Expected return value "CONNECTION SUCCESSFUL".                        ***
*** Received "xxxxxxxxxx".                                                ***
***                                                                       ***
*** Routine: ^MAGDIW5                          Please Call Support Personnel ***
*****************************************************************************
```

The **MAG_VISTA_SEND_IMAGE.exe** program to attempts to create a TCP/IP connection to the destination Storage Provider application entity. This connection could not be created.

1.18.7.4 Could Not Establish Association with Destination SCP

```
*******************************************************************************
*** ERROR IN VISTA SEND IMAGE                                                 ***
***                                                                           ***
*** Expected return value "ASSOCIATION ACKNOWLEDGE".                          ***
*** Received "xxxxxxxxxx".                                                    ***
***                                                                           ***
*** Routine: ^MAGDIW6                          Please Call Support Personnel ***
*******************************************************************************
```

The MUMPS Transmission Controller created an Association Request and had the MAG_VISTA_SEND_IMAGE.exe program send it to the destination Storage SCP. The destination did not send back an Association Response.

1.18.7.5 DICOM Network Error

```
*******************************************************************************
*** ERROR IN VISTA SEND IMAGE                                                 ***
***                                                                           ***
*** Job terminated due to Network Error #n                                    ***
***                                                                           ***
*** Routine: ^MAGDIW5                          Please Call Support Personnel ***
*******************************************************************************
```

This error occurs while sending a DICOM message when one of the following conditions arises:

- Connection/association dropped/aborted by peer application entity
- Unknown PDU (**P**rotocol **D**ata **U**nit) type received
- Garbled transmission

These are errors caused by the DICOM system receiving images from **V***IST***A**.

1.18.7.6 Image Transmission Acknowledgement Failed

```
*******************************************************************************
*** ERROR IN VISTA SEND IMAGE                                                 ***
***                                                                           ***
*** Unexpected Response                                                       ***
*** Expected "IMAGE SENT", received "xxxxxxxxxx".                             ***
***                                                                           ***
*** Routine: ^MAGDIW5                          Please Call Support Personnel ***
*******************************************************************************
```

The MUMPS Transmission Controller instructed the MAG_VISTA_SEND_IMAGE.exe program to send an image to the destination Storage SCP. An error on the Storage SCP prevented successful transmission of the image.

1.18.7.7 Image Transmission Failed

```
*********************************************************************************
*** ERROR IN VISTA SEND IMAGE: DESTINATION STORAGE FAILURE                     ***
*** Status=XXXXX        Error ID: YYYYYY                                       ***
*** Comment: ZZZZZ                                                             ***
*** Offending Element: (gggg,eeee)  <name of element>                          ***
***                                                                            ***
*** Routine: ^MAGDIW5                                                          ***
*********************************************************************************
```

The destination Storage SCP was not able to properly handle an image transmitted to it by the MAG_VISTA_SEND_IMAGE.exe program. The complete reason for the error is given in the message.

1.18.7.8 Cannont Acknowledge Establishment of Association

```
*********************************************************************************
*** ERROR IN VISTA SEND IMAGE                                                  ***
***                                                                            ***
*** Expected return value “ASSOCIATION ACKNOWLEDGE”.                           ***
*** Received "xxxxxxxxxx".                                                     ***
***                                                                            ***
*** Routine: ^MAGDIW6                          Please Call Support Personnel ***
*********************************************************************************
```

The MUMPS Transmission Controller had the MAG_VISTA_SEND_IMAGE.exe program send an Association Acknowledge Request to the destination Storage SCP. The error is that the Storage SCP did not respond with a proper Association Acknowledge Response.

1.18.7.9 Cannot Acknowledge Release of Association

```
*********************************************************************************
*** ERROR IN VISTA SEND IMAGE                                                  ***
***                                                                            ***
*** Unexpected response                                                        ***
*** Expected "ASSOCIATION ENDED", Received "xxxxxxxxxx".                       ***
***                                                                            ***
*** Routine: ^MAGDIW6                          Please Call Support Personnel ***
*********************************************************************************
```

The MUMPS Transmission Controller had the MAG_VISTA_SEND_IMAGE.exe program send an Association Release Request to the destination Storage SCP. The error is that the Storage SCP did not respond with a proper Association Release Response.

1.18.8 Error Messages Report by DICOM Message Queuing Software

Between the message processing and transmission steps, all DICOM messages are stored in intermediate files (*.DCM) on the local system. For the sake of flexibility, four different mechanism are provided:

1. First-In-First-Out (FIFO) queues for PACS messages for the Text Gateway
2. Direct mode for queries (e.g., Modality Worklist) for the Text Gateway
3. FIFO queue for image acquisition (**D:\dicom\image_in\…**)

4. FIFO queue for image transmission (**D:\dicom\image_out\…**

The error messages in this section pertain to the intermediate file processing for the Text Gateway.

1.18.8.1 Error in Directory Lookup of FIFO Queue Subdirectory

```
*****************************************************************************
*** DICOM TEXT GATEWAY ERROR                                              ***
***                                                                       ***
*** Cannot locate directory xxxxxxxxxx                                    ***
*** Host File System Error xxxxxxxxxx                                     ***
***                                                                       ***
*** Routine: ^MAGDQUE0                        Please Call Support Personnel ***
*****************************************************************************
```

This error occurs when the Text Gateway is doing a directory lookup of a FIFO queue subdirectory (typically **D:\dicom\data1 \ANNNNN**) for writing a new file. This is a catastrophic error that prevents the application from even creating the new file's subdirectory, if it did not already exist.

The error message includes the name of the subdirectory that got the error and the error code from the directory lookup operation. The most likely problem is that the path is pointing to a non-existent **D:\dicom\data1** directory.

1.18.8.2 Cannot Create FIFO Queue Subdirectory

```
*****************************************************************************
*** DICOM TEXT GATEWAY ERROR                                              ***
***                                                                       ***
*** Cannot create directory xxxxxxxxxx                                    ***
*** Host File System Error: xxxxxxxxxx                                    ***
***                                                                       ***
*** Routine: ^MAGDQUE0                        Please Call Support Personnel ***
*****************************************************************************
```

This error occurs when the Text Gateway is creating a new FIFO queue subdirectory (typically **d:\DICOM\Data1\Annnnn**).

The error message includes the name of the subdirectory that got the error and the error code from the **MKDIR** operation. The most likely problems are either that the permissions prevent the subdirectory from being created or the disk drive is out of space.

1.18.8.3 Invalid Data in Queue Pointer File

```
*****************************************************************************
*** DICOM TEXT GATEWAY ERROR -- WRITING DICOM FILE                        ***
***                                                                       ***
*** Bad File Pointer:                                                     ***
*** "xxxxxxxxxx" = "xxxxxxxxxx".                                          ***
*** Value of pointer should be 7 digits.                                  ***
***                                                                       ***
*** Routine: ^MAGDQUE0                        Please Call Support Personnel ***
*****************************************************************************
```

This error occurs when the Text Gateway finds Queue processor invalid data in one of the FIFO queue pointers files. (The "pointer files" are named **x_READ.PTR** and **x_WRITE.PTR**, where **x** is A, B, C, D, E, F, G, H, S, T, U, V, W, X, Y,or Z.) The values in these files must be 7-digit integer numbers with leading zeroes. When any other value is encountered in one of these files, this error will occur.

The error message will include the name of the offending file and the value that is encountered in that file.

Typically, this error occurs when a queue pointer file was modified manually, not through the software in the **V*IST*A** Imaging DICOM Gateway. When the displayed value indicates that a "strange" character appears leading or trailing the queue entry number, use the NOTEPAD editor to correct the offending file and enter the appropriate value. When the value contains an embedded control character, it may be necessary to erase the complete line, and re-enter it.

For example, suppose the **X_READ.PTR** is null (zero bytes long), and should really contain 12345. Use NOTEPAD and type the value **0012345<Enter>.**

1.18.8.4 Cannot Create a FIFO Queue Text File

```
*****************************************************************************
*** DICOM TEXT GATEWAY ERROR -- WRITING DICOM FILE                        ***
***                                                                       ***
*** Renaming xxxxxxxxxx to xxxxxxxxxx failed                              ***
*** Please delete the file "xxxxxxxxxx" and restart.                      ***
***                                                                       ***
*** Routine: ^MAGDQUE0                        Please Call Support Personnel ***
*****************************************************************************
```

This error occurs when the DICOM Text Gateway is not able to create a file in a FIFO Queue. When writing a DICOM file, the file is first created with a temporary name (typically **ANNNNNNN.tmp**), and then is renamed to its permanent name (in this case, **ANNNNNNN.dcm**). The error occurs whenever the temporary file cannot be renamed to its permanent name. This may occur when there is already a file present with that same name present, with permissions set so that it can't be deleted. Manually deleting the file will allow the processing to continue.

The error message will include the temporary file name and the permanent file name.

1.18.8.5 Unrecognized Command Code in DICOM Message

```
*****************************************************************************
*** DICOM GATEWAY ERROR                                                   ***
***                                                                       ***
*** Unexpected command value processing "xxxxxxxxxx".                     ***
*** Expected an integer numeric value, received "xxxxxxxxxx".             ***
***                                                                       ***
*** Routine: ^MAGDQUE4                        Please Call Support Personnel ***
*****************************************************************************
```

This error occurs when the DICOM Gateway encounters an unrecognized command code in an incoming DICOM message.

The error message will include the name of the data stream being processed and the offending command code.

This is probably an error on the configuration of the peer application entity.

1.18.8.6 Unsupported Command in DICOM Message

```
*****************************************************************************
*** DICOM GATEWAY ERROR                                                   ***
***                                                                       ***
*** Unexpected command value processing "xxxxxxxxxx".                     ***
*** Cannot find label "xxxxxxxxxx" in routine ^MAGDQUE4.                   ***
***                                                                       ***
*** Routine: ^MAGDQUE4                        Please Call Support Personnel ***
*****************************************************************************
```

This error occurs when the DICOM Gateway encounters an unsupported command in an incoming DICOM message.

The error message will include the name of the data stream being processed and the offending command code.

This is probably an error on the configuration of the peer application entity.

1.18.9 TCP/IP Communications Errors

1.18.9.1 Cannot Connect to TCP/IP Socket (Set-Up Error)

```
*****************************************************************************
*** TCP not setup correctly                                               ***
***                                                                       ***
*** Connecting to IP Address "xxxxxxxxxx", port "xxxxxxxxxx".              ***
*** Cannot open Socket                                                    ***
***                                                                       ***
*** Routine: ^MAGDTCP1                        Please Call Support Personnel ***
*****************************************************************************
```

This error occurs when the DICOM Gateway attempts to connect to a TCP/IP socket, and no connection can be established.

The error message will include the values of the IP Address and the port number that were used in the attempt to open the socket.

Typically, the cause of this error is that either the IP Address or the Port Number is incorrectly specified in the **F:\DICOM\Dict\SCU_List.DIC** master file. The NOTEPAD editor can be used to correct this file.

1.18.9.2 Cannot Find DICOM Message File to Send

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** Cannot find file "xxxxxxxxxx".                                          ***
***                                                                         ***
*** Routine: ^MAGDTCP2                          Please Call Support Personnel ***
*******************************************************************************
```

This error occurs when the file containing the DICOM message file to be transmitted cannot be located.

1.18.9.3 Invalid First 8-bytes in DICOM Message

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** Incorrect DICOM Message -- first 8 bytes are wrong                      ***
*** Group=xxxxxxxxxx, Element=xxxxxxxxxx, Length=xxxxxxxxxx                 ***
***                                                                         ***
*** Routine: ^MAGDTCP2                          Please Call Support Personnel ***
*******************************************************************************
```

The first eight bytes of a DICOM message file should be “0 0 0 0 4 0 0 0” hexadecimal. This represents element (0000,0000) with a length of 4. This data must always be correct.

This error most likely occurs when the system is trying to send a zero-length DICOM file that was created due to running out of disk space.

1.18.9.4 Length-to-End Missing in DICOM Message

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** Incorrect DICOM Message -- Length to End not present                    ***
*** Group=xxxxxxxxxx, Element=xxxxxxxxxx, Length=xxxxxxxxxx                 ***
***                                                                         ***
*** Routine: ^MAGDTCP2                          Please Call Support Personnel ***
*******************************************************************************
```

The second required element in a **V*IST*A** DICOM message is (0000,0001) which specifies the length to the end of the message. This is used by the TCP routine for performance to concatenate several messages into a single file (typically for Modality Worklist responses).

If this element is missing, it probably represents a programming error.

1.18.9.5 SOP Class UID Missing in DICOM Message

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** Incorrect DICOM Message -- SOP Class UID not present                    ***
*** Group=xxxxxxxxxx, Element=xxxxxxxxxx, Length=xxxxxxxxxx                 ***
***                                                                         ***
*** Routine: ^MAGDTCP2                        Please Call Support Personnel ***
*******************************************************************************
```

The third required element in a **V*IST*A** DICOM message (0000,0002) specifies the SOP Class UID for the message. This is needed to determine the Presentation Contact ID for the message.

If this element is missing, it probably represents a programming error.

1.18.9.6 Invalid SOP Class UID in DICOM Message

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** Incorrect SOP Class UID format <<xxxxxxxxxx>>                           ***
***                                                                         ***
*** Routine: ^MAGDTCP2                        Please Call Support Personnel ***
*******************************************************************************
```

If the SOP Class UID for the message, element (0000,0002), has the wrong format (i.e., doesn't begin with a numeric), this error will occur.

This probably represents a programming error.

1.18.9.7 Unknown Presentation Context ID

```
*******************************************************************************
*** DICOM GATEWAY ERROR                                                     ***
***                                                                         ***
*** Unknown Presentation Context ID for <<xxxxxxxxxx>>                      ***
***                                                                         ***
*** Routine: ^MAGDTCP2                        Please Call Support Personnel ***
*******************************************************************************
```

If the SOP Class UID for the message, element (0000,0002), has the wrong value this error will occur.

This is most likely caused by trying to send a message for a SOP Class that was not negotiated for the association. It is typically seen during "trial and error" configuration of vendor systems.

1.18.9.8 Unexpected PDU (expected 04 = P-Data)

```
*****************************************************************************
*** DICOM GATEWAY ERROR                                                   ***
***                                                                       ***
*** Expected PDU type 04(hex),                                            ***
*** found "xxxxxxxxxx".                                                   ***
***                                                                       ***
*** Routine: ^MAGDTCP3                        Please Call Support Personnel ***
*****************************************************************************
```

This error occurs when the DICOM Gateway attempts to receive data from a peer application entity and the code for the PDU Type is not equal to 04 (hex), which is the code for P-Data. (A PDU is a **P**rotocol **D**ata **U**nit.)

This is caused by a DICOM implementation problem with a vendor system.

1.19 Errors that may occur in Remote Procedure Calls

The error messages listed in this chapter may occur in Remote Procedure Calls. The message texts are typically displayed on the client-station from which the Remote Procedures were invoked.

1.19.1 MAG DICOM AUDIT COUNT (COUNT^MAGDRPC7)

This Remote Procedure may return the following error messages:

- -1,No Location Specified
- -2,No Message Specified

Both messages indicate that the software on the client-station omitted to specify a parameter that is needed for proper operation of the Remote Procedure.

1.19.2 MAG DICOM FIND LOCATION (FINDLOC^MAGDRPC8)

This Remote Procedure may return the following error message:

- -1,Invalid location "*name*"

This message indicates that there is no location (or division) at the current site with the name that was specified by the client-system. Either the client-system is mis-configured, or an end-user entered an invalid name.

1.19.3 MAG DICOM GET BASIC IMAGE (IMAGE^MAGDRPC2)

This Remote Procedure may return the following error messages:

- -1,Invalid IEN (*number*)
- -2,No data for "*numbe*r".
- -3,Image #*number* has been deleted.

The first message (-1…) indicates that the value of the parameter that should identify the image for which information is to be retrieved is not a numeric value.

The second message (-2…) indicates that the value of this parameter has a numeric value, but there is no image with that (internal) number.

The third message (-3…) indicates that information is requested about an image that has been deleted. In this case, no information other than the error message is returned.

1.19.4 MAG DICOM GET NEXT QUEUE ENTRY (NEXTIMG^MAGDRPC4)

This Remote Procedure may return the following error messages:

- -1,No Origin Specified
- -2,No studies to be transmitted
- -3,No files to be transmitted

The first message indicates that the software on the client-station omitted to specify an essential parameter. Most likely, this error condition is the result of a mis-configuration of the client-station.

The second and third messages are informational only and indicate that all requested images (or studies) have been transmitted.

1.19.5 MAG DICOM GET PLACE (GETPLACE^MAGDRPC8)

This Remote Procedure may return the following error message:

- -1,Location "*name*" not found.

This message indicates that there is no location (or division) at the current site with the name that was specified by the client-system. Either the client-system is mis-configured, or an end-user entered an invalid name.

1.19.6 MAG DICOM GET SERVICE INFO (SERVICE^MAGDRPC2)

This Remote Procedure may return the following error message:

- -1,No Imaging Site Parameters defined

This message indicates that the configuration of the Imaging Site Parameters (on the **V*IST*A**) system still has to be completed. Operation on the client cannot proceed until the configuration on the server is complete.

1.19.7 MAG DICOM HL7 POINTER ACTION (HL7PTR^MAGDRPC8)

This Remote Procedure may return the following error messages:

- -1,Invalid Pointer "*value*".

- -2,Invalid Request: "*action*".

The first of these messages indicates that the value of the parameter that identifies the HL7-message, as specified by the software on the client-station, cannot be used to identify a message that is currently present in the system. Either the software on the client system is working from obsolete information (server was purged since last update of the client), or an end-user entered an erroneous pointer number.

The second message indicates that the software on the client-station specified an erroneous value for the parameter that indicates the action to be taken by the Remote Procedure. This condition can only be resolved with a correction to the client-software.

1.19.8 MAG DICOM IMAGE PROCESSING (ENTRY^MAGDIR8)

This Remote Procedure may return the following error messages:

- xxxxx
  Problem detected by routine xxxxx
  Error Code: xxxxx

Messages of this type are always followed by one of the messages in section 1.17.6. The subsequent message provides more detailed information about the error. See section 1.17.6 for these details.

1.19.9 MAG DICOM INCORRECT IMAGE CT (CORRECT^MAGDRPC8)

This Remote Procedure may return the following error messages:

- -1,No Location Specified
- -2,No Gateway Specified

These messages indicate that the software on the client-station omitted to specify a value for a required parameter. Most likely, these error conditions are the result of a mis-configuration of the client-station.

1.19.10 MAG DICOM LOOKUP STUDY (LOOKUP^MAGDRPC4)

This Remote Procedure may return the following error messages:

- -1,No Case or Consult Number Specified
- -2,No Study Date Specified
- -3,Invalid study date "*text*".
- -4,Consult is cancelled
- -5,Consult/procedure not on file

The first two messages indicate that the software on the client-station omitted to specify a required parameter. Such an omission may happen when an end-user just presses the enter-key, rather than provide a complete answer to a question.

The other three messages indicate cases where the provided information cannot be matched successfully with information in the **V*IST*A** database.

1.19.11 MAG DICOM NETWORK STATUS (ONOFLINE^MAGDRPC5)

This Remote Procedure may return the following error message:

- -1,No Network Location Specified

This message indicates that the client system omitted to provide a value for the parameter that indicates the location (or division) at the current site from which images are to be transmitted. Most likely, the client-system is mis-configured..

1.19.12 MAG DICOM PACS CUTOFF DATE (CUTOFF^MAGDRPC1)

This Remote Procedure may return the following error messages:

- -2,No PACS Installed
- -3,PACS Retention Parameter not defined

Both messages are informational only. The first message (-2,…) indicates that the site-(location, division) is configured as if no PACS is installed. The other message indicates that as yet no value for the retention period parameter has been entered into the site configuration.

1.19.13 MAG DICOM PACS MINIMUM SPACE (MINSPACE^MAGDRPC1)

This Remote Procedure may return the following error messages:

- -2,No PACS Installed
- -3,PACS Minimum Space Percentage Parameter not defined

Both messages are informational only. The first message (-2,…) indicates that the site-(location, division) is configured as if no PACS is installed. The other message (-3,…) indicates that as yet no value for the minimum diskspace parameter has been entered into the site configuration.

1.19.14 MAG DICOM QUEUE IMAGE (QUEUE^MAGDRPC3)

This Remote Procedure may return the following error messages:

- -1,No Image specified
- -2,No Destination specified
- -3,No Origin specified
- -4,Cannot Queue Image Object Type "*type*".

The first three messages indicate that the software on the client-station omitted to specify values for required parameters. Most likely, such a situation is the result of a failure to make a selection at an earlier stage in the process.

The fourth message (-4,…) indicates that the requested image is of such a nature that it is not permitted to enter that image into this transmission queue. Only images that are of the following "types" can be transmitted using the DICOM C-Store protocol:

- Type 3 = X-Ray
- Type 11 = X-Ray Group
- Type 100 = DICOM Image

1.19.15 MAG DICOM QUEUE INIT (INIT^MAGDRPC4)

This Remote Procedure may return the following error messages:

- -1,No entries at all in queue.
- -2,No entries present for "*name*".
- -3,No origin specified.

The last message (-3,…) indicates that the client system omitted to provide a value for the parameter that indicates the location (or division) at the current site from which images are to be transmitted. Most likely, the client-system is mis-configured.

The other two messages are informational only. Both indicate that currently no images are queued up to be transmitted.

1.19.16 MAG DICOM ROUTE EVAL LOG (EVALLOG^MAGDRPC6)

This Remote Procedure may return the following error messages:

- -1,No task #*number*
- -2,MAXIMUM parameter = *number* < 1
- -3,*text*

The first message (-1, …) indicates that the client-system specified a value for the TaskMan task number that does not correspond to any active task. Most likely, the **V*IST*A** system has been restarted and some clean-up or house-keeping tasks have been performed.

The second message (-2, …) indicates that the value for the parameter that specifies the maximum number of log-messages that are to be returned to the client has an unusable value. This condition can only be remedied by correcting the software on the client-system.

The third message (-3, …) is informational only. This message indicates that the TaskMan task, for which messages were being relayed, has stopped. The text that is included in this message contains the reason that TaskMan provided for ending the task.

1.19.17 MAG DICOM ROUTE EVAL START (START^MAGDRPC5)

This Remote Procedure may return the following error messages:

- -1,No Location Specified
- -2,No Routing Rules Specified

- -3,A Rule Evaluator is Already Running for *location*

The first two messages indicate an error or omission in the set-up of the DICOM Gateway from which the request was issued.

The third message indicates that a rule-evaluator is already running for the requested location. Only one evaluation may be running for any given location (or division) at any time.

1.19.18 MAG DICOM ROUTE NEXT FILE (XMIT^MAGDRPC5)

This Remote Procedure may return the following error messages

- -1,No Location Specified
- -2,No Valid Destinations Specified
- -1~No routable files found for image *nnnnn*

The first message indicates an omission in the set-up of the DICOM Gateway from which the request was issued.

The second message indicates that the end-user did not select any destinations to which files might be transmitted.

The third message indicates that a queue entry is being processed for an image that has no actual files associated with it, i.e. there are no files to be transmitted for that image. Either the image is currently in a “deleted” state, or there were never any files successfully stored for this image.

1.19.19 MAG DICOM ROUTE PURGE DONE (PURGDONE^MAGDRPC6)

This Remote Procedure may return the following error message:

- -1,No Location Specified

This message indicates an omission in the set-up of the DICOM Gateway from which the request was issued.

1.19.20 MAG DICOM ROUTE REMOVE OBSO (REMOBSO^MAGDRPC6)

This Remote Procedure may return the following error message:

- -1,No Location Specified

This message indicates an omission in the set-up of the DICOM Gateway from which the request was issued.

1.19.21 MAG DICOM ROUTE REQUEUE (REQUEUE^MAGDRPC6)

This Remote Procedure may return the following error message:

- -1,No Location Specified

This message indicates an omission in the set-up of the DICOM Gateway from which the request was issued.

1.19.22 MAG DICOM ROUTE TRANSACT STS (TRANSTS^MAGDRTIM)

This Remote Procedure may return the following error messages:

- -1,No Location Specified
- -2,Invalid Transaction ID

The first message indicates an omission in the set-up of the DICOM Gateway from which the request was issued.

The second message indicates an error in the software that performed the request from the client station. A status can only be provided for a "known" transaction. The client system receives transaction identifiers as new transactions are created.

1.19.23 MAG DICOM ROUTE VALID DEST (VALDEST^MAGDRPC1)

This Remote Procedure may return the following error message:

- -1,"xxxxxx" is not a valid destination

This message indicates that an attempt to re-configure a DICOM Gateway included a name for a location that is not defined in the **V*IST*A** database.

1.19.24 MAG DICOM SET PACS PARAMS (SETPACS^MAGDRPC8)

This Remote Procedure may return the following error messages:

- -1,No Place Specified.
- -2,Invalid Place Specified.

The first message indicates an omission in the set-up of the DICOM Gateway from which the request was issued.

The second message indicates that an attempt to re-configure a DICOM Gateway included a name for a location that is not defined in the **V*IST*A** database.

1.19.25 MAG DICOM TEXT PROCESSING (ENTRY^MAGDHRS1)

This Remote Procedure may return the following error message:

- -1 ^MAGDHL7(2006.5,*nnnnnn*,*mmm*,...) is incomplete

This message indicates that, after waiting the maximum time, an HL7 message is still not complete. Most likely, the process that generated the message did not complete successfully.

1.19.26 MAG DICOM UPDATE GATEWAY NAME (UPDTGW^MAGDRPC8)

This Remote Procedure may return the following error messages:

- -1,No Gateway Name specified
- -2,No Gateway Location specified

These messages indicate omissions in the set-up of the DICOM Gateway from which the request was issued.

1.19.27 MAG DICOM UPDATE SCU LIST (UPDTAPP^MAGDRPC8)

This Remote Procedure may return the following error message:

- -1,Missing or Inconsistent Parameters.

This indicates an omission or inconsistency in the set-up of the DICOM Gateway from which the request was issued.

1.19.28 MAG DICOM WORKSTATION VERSION (STATION^MAGDRPC1)

This Remote Procedure may return the following error message:

- -1,No Station Identifier Specified

This message indicates an omission in the set-up of the DICOM Gateway from which the request was issued.